



- Connectivity & Cable Management
- Central Office
- Local Loop & Transmission
- OSP Installation & Maintenance Products
- Power & Protection
- Tools & Test Equipment
- Voice Products
- Wire & Cable

The Service Provider *Solutions Guide*



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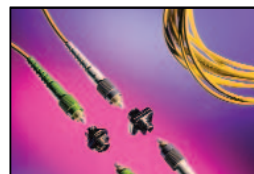
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REAL SOLUTIONS



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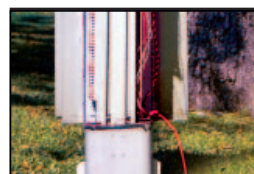
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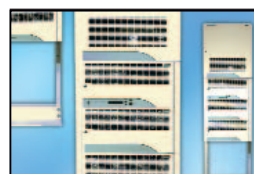
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A



Fiber Optic Distribution

8400 SERIES FIBER DISTRIBUTION UNITS

The 8400 series fiber distribution system is capable of accommodating up to 144 ports. It is available in versions that are lockable and provide space, which allows for up to 72 splices in the rear of the unit.

- Features lockable doors for added protection
- Modular construction makes upgrades, customized applications and future expansions easier.
- Self-contained splicing unit saves space and minimizes expense.
- There is an assortment of coupling plates, styles and counts available.

Catalog #	Description
(A) 8423	Fiber distributor unit, rack mount, 12-24 port
8423-BKT	23" rack-mounting kit
8423-EXP	12-24 port expander
8425	Fiber optic distribution unit, rack mount, 72 port
8425-BP	Fiber optic distribution unit with splice tray, 72 port
8425-BPL	Fiber optic distribution unit with splice tray and lock, 72 port
8425-L	Fiber optic distribution unit, lockable, 72 port
8432	Distribution unit, wall mount, 12 port
8434	Fiber distribution unit, wall mount, 24-36 port
8436	Distribution unit, wall mount, 36-48 port
8475	Vertical jumper organizer
8499-1W	Plate, blank, single position
8499-4W	Plate, blank, four position
2521-F	Fusion splice insert, two pack
2521-FL	Fiberlok splice insert, two pack
2522	Fiber splice organizer tray, small

B



Fiber Connectors

Fiber Connectors and Couplings

Fiber optic connectors and couplings provide pull-proof connections and enhance performance in cable retention. Fiber connectors are available in FC/PC, SC and ST for use within epoxy, hot melt and Crimplok™ applications.

FC/PC CONNECTORS

Field-mountable, pull-proof connectors are fully compatible with all PC connectors adhering to the NTT specification. The FC/PC connectors maximize termination yield through ease of mounting in a high-performance polishing procedure. They are designed for advanced fiber optic systems requiring exceptional stability and low reflections.

Catalog #	Description
(B) 8406-FS	8406-FS plate, 6 port, FC singlemode with couplings
8406-FSA/2.15	8406-FSA/2.15 plate, 6 port, FC singlemode angle polish with couplings
8408-FS	8408-FS plate, 8 port, FC singlemode with couplings
8406-FM	8406-FM plate, 6 port, FC multimode with couplings

Supplier Prefix: MMM

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C



D



SC CONNECTORS AND COUPLINGS

SC connectors and couplings are designed for the most advanced fiber optic systems. These versatile connectors offer easy installation in both long and short transmission lines, subscriber networks or premises environments. They come in singlemode and multimode, utilizing epoxy adhesive. They are also available preloaded with hot melt adhesive and as a Crimplok™ connector.

Catalog #	Description
(C) 8406-CS	8406-CS plate, 6 port, SC singlemode with couplings
8406-CSA	8406-CSA plate, 6 port, SC singlemode angle polish with couplings
8408-CS	8408-CS plate, 8 port, SC singlemode with couplings
8408-CSA	8408-CSA plate, 8 port, SC singlemode angle polish coupling
8412-DCS	8412-DCS plate, 12 port, SC singlemode duplex with couplings
8408-DCM	8408-DCM plate, 8 port, SC multimode duplex with couplings
8412-DCM	8412-DCM plate, 12 port, SC multimode duplex with couplings
8406-DCM	8406-DCM plate, 6 port, duplex, SC multimode with couplings
8408-CM	8408-CM plate, 8 port, SC multimode with couplings

ST CONNECTORS AND COUPLINGS

The ST connector product line provides high repeatability and low light loss for premises, LAN and telco applications. The 3M products are supplied with a high-quality PC finish on zirconia ceramic ferrules.

Catalog #	Description
(D) 8406-TS	8406-TS plate, 6 port, ST singlemode with couplings
8408-TS	8408-TS plate, 8 port, ST singlemode with couplings
8412-TS	8412-TS plate, 12 port, ST singlemode with couplings
8406-TM	8406-TM plate, 6 port, ST multimode with couplings
8408-TM	8408-TM plate, 8 port, ST multimode with couplings
8412-TM	8412-TM plate, 12 port, ST multimode with couplings

Supplier Prefix: MMM



A



B



Cable Management

FIBERGUIDE® FIBER CABLE MANAGEMENT

ADC's FiberGuide fiber optic cable raceway system provides routing paths and optimum cable management to organize and protect vital fiber facilities between the fiber MDF and the associated electronic switching equipment. The system is designed to assure that a 2 in. minimum bend radius is maintained, regardless of which components and sections are assembled together. Its ultra-strong straight sections are self-supporting over a span of up to 6 ft. FiberGuide systems are available in widths of 2 in., 4 in., 6 in. and 12 in. A plenum solution is also available. Graybar carries a complete inventory of ADC FiberGuide solutions.

Catalog #
(A) For a FiberGuide Product Catalog, please contact your local Graybar representative.

Building Entrance

FIBER ENTRANCE CABINETS

ADC's fiber entrance cabinets provide splicing, administration and storage for outside plant and intrafacility fiber cables. Deployed in cable vaults or building equipment areas, the cabinets are a cost-effective, space-saving alternative to splicing on the fiber frame. Cabinets accommodate from 144 splices up to a total of 864 splices, in varying units. Other accessories are available.

Catalog #	Description
(B) FEC-144	144 single-strand fiber capable, 6 standard drawer configuration
FEC-288	144 single-strand fiber capable, 12 stranded drawer configuration
FST-HS	12 fiber, heat shrink fusion splice tray
FST-MT	12 fiber, mechanical/elastomeric splice tray

Supplier Prefix: ADC



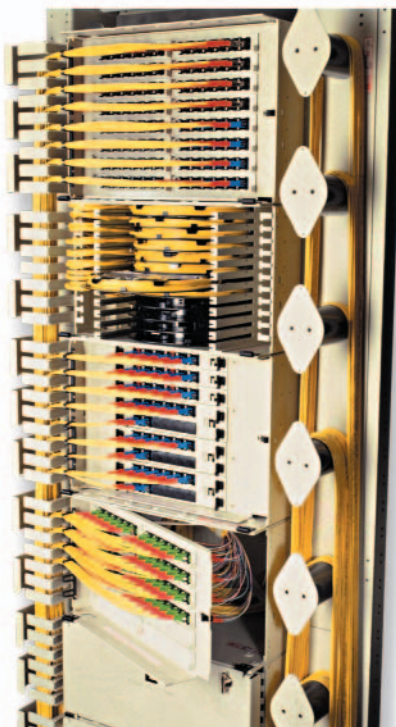
A



B



C



Cross-Connect Panels

COPPER CONNECTIVITY (DS1)

ADC's DSX-1 serves as an integral component in today's multiservice broadband networks. A DSX-1 system is designed to be a centralized system providing termination, system turn up, test and access, and circuit reconfiguration. The DSX-1 system also offers an improved method for circuit identification and cable management. DSX-1 panels are available in a wide variety of configurations to meet your requirements.

Catalog #	Description
(A) D1M-1A0028	84 termination 19/23" rack-mount, regular front cross-connect panel, labeled 1-28 ABC, putty-white finish
D1M-1C0029	84 termination 19/23" rack-mount, regular front cross-connect panel, labeled 1-28 ABC, black finish
D1M-1B0004	84 termination 23" rack-mount, rear cross-connect panel, labeled 1-28 ABC, putty-white finish
D1M-1B0005	84 termination 23" rack-mount, rear cross-connect panel, labeled 1-84, putty-white finish
DSX-DR19	56 termination 19/23" rack-mount, regular front cross-connect panel, labeled 1-28 AB, black finish
DSX-BEST-56/19	56 termination 19" rack-mount, rear cross-connect panel, labeled 1-28 AB, black finish

COPPER CONNECTIVITY (DS3)

ADC's RZX-3 digital signal cross-connect system allows technicians to patch, terminate and rearrange DS3/E3 circuits. The modular system is built upon reliable mid-size jacks and BNC connectors, accommodating 24 or 32 circuits per chassis. Chassis may be mounted in standard 19-in. or 23-in. racks. Designed for cable management, the system includes adjustable cable trays to accommodate maximum cable density. Other DSX-3 cross connect panels are available in a variety of configurations. Please contact your local Graybar representative for more information.

Catalog #	Description
(B) DSX4R-24BO-C24	DSX4R preterminated chassis, 24 position, front LEDs
DSX4R-32BO-C32	DSX4R preterminated chassis, 32 position, front LEDs
DSX4R-24BO-D24	DSX4R preterminated chassis, 24 position, front and rear LEDs
DSX4R-32BO-D32	DSX4R preterminated chassis, 32 position, front and rear LEDs
DSX-4R-M30	RZX-3 3-port jack kit
DSX-4R-M40	RZX-3 4-port jack kit
DSX-4R-M60	RZX-3 6-port jack kit
DSX-4J-CBL-4	Jumper ring kit, order one per chassis

Fiber Distribution Panels

FL2000 SYSTEM

ADC's FL2000 products provide a centralized point for terminating, splicing and storing fiber optic jumpers, and housing passive optical components. ADC's FL2000 empty rack- or cabinet-mount panels provide the capacity to terminate and splice fiber, and store pigtailed. The panels are designed for 19-in. (48.26cm) racks or cabinets, but mounting kits are available for 23-in. (58.42cm) rack mounting or wall mounting. The panels are available with either a putty or black finish and feature a variety of fiber capacities. These empty panels provide a modular solution that enables growth in fiber optic networks. All panels can double capacity with LX.5[®] adapters.

Catalog #	Description
(C) FL2-48SPNL2	FL2 24-position splice/terminate module, 19" rack mount
FL2-96SPNL2	FL2 24-position splice/terminate module, 19" rack mount
FST-DRS12HS	Splice wheel, with chip, 12 fiber HS
FST-DRS12MT	Splice wheel, with chip, 12 fiber HS
FST-DRS12NT	Splice wheel, with chip, 12 fiber HS
FL2-6P7SC605R	FL2 angled 6 pack, adapters, 5M pigtail assemblies, singlemode, ultra PCSC
FL2-6P4SC605R	FL2 angled 6 pack, adapters, 5M pigtail assemblies, singlemode, ultra PCST

Supplier Prefix: ADC



A



Cable Management

3M™ SCOTCH™ CABLE AND WIRE TIE WRAPS

Scotch cable and wire tie wrap provides a convenient new way to bundle wire and cables, assemblies, and to handle other fastening needs more safely and securely. This reliable fastener provides many advantages over traditional ways to bundle.

- Holds greater suspended weight than traditional fasteners
- Gentle on sensitive cable and wire, eliminating crimping, abrasion and work damage
- Reusable, making maintenance and retrofits easier
- Flexible and easier to adapt to most configurations
- Thinner profile is less likely to snag in pulling.
- Cinches with less hand and wrist stress required for more rigid fasteners
- Available in a variety of colors, sizes and shapes, including easy-to-apply straps, perforated rolls and continuous rolls
- Economical for both permanent and temporary applications

Catalog #	Description
(A)	Scotch 100 cable and wire tie wrap 6" (152mm) straps
100-6ST-White	White
100-6ST-Yellow	Yellow
100-6ST-Red	Red
100-6ST-Blue	Blue
100-6ST-Green	Green
100-6ST-Black	Black
	Scotch 100 cable and wire tie wrap perforated rolls in 6" (152mm) strips
100-3/8-6PR	Black
100-1/2-6PR-Black	Black
100-1-6PR	Black
	Perforated in 8" (203mm) strips
100-3/8-8PR	Black
100-1/2-8PR-Black	Black
100-1/2-6PR-White	White
100-1/2-6PR-White	White
100-1/2-6PR-Blue	Blue
100-1/2-6PR-Red	Red
100-1/2-6PR-Yellow	Yellow
100-1-8PR-Black	Black
100-1-8PR-Blue	Blue
100-1-8PR-Green	Green
100-1-8PR-Red	Red
100-1-8PR-White	White
100-1-8PR-Yellow	Yellow
	Scotch 100 cable and wire tie wrap continuous rolls
100-3/8R	Black
100-1/2R	Black
100-1R	Black
	Scotch 200 cable and wire tie wrap 6" (152mm) strap
200-6ST	Black
	Scotch HHD-100 cable and wire tie wrap dispenser
100-HHD	Hand-held dispenser
100-HHD Blade	Replacement blade

Supplier Prefix: MMM

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A



B



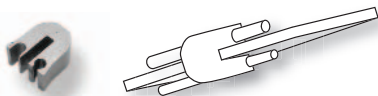
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E



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G



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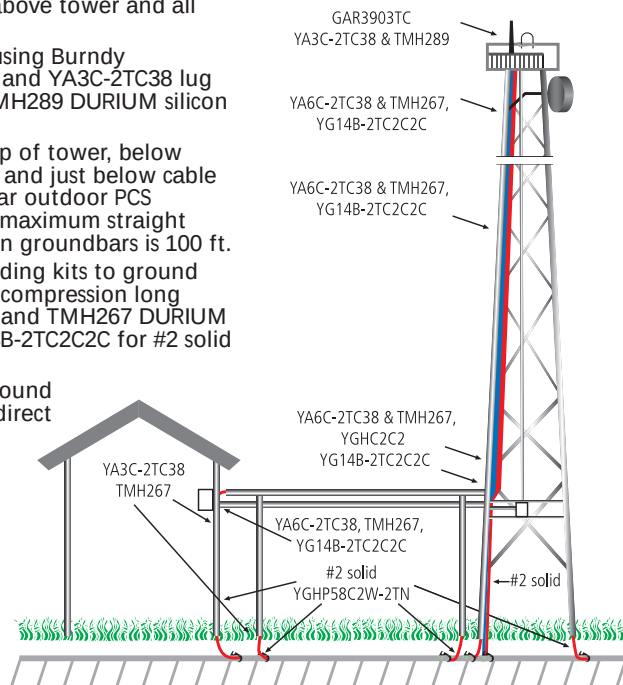

Leasing
Available

Supplier Prefix: BUN

Grounding Products

TOWER PROTECTION AND WAVEGUIDE BONDING AND GROUNDING

- Locate air terminal 18 in. above tower and all antennas.
- Ground antenna support using Burndy GAR3903TC ground clamp and YA3C-2TC38 lug for #2 solid copper with TMH289 DURUM silicon bronze hardware.
- Locate ground bar near top of tower, below bends in waveguide cable, and just below cable entrance to building or near outdoor PCS switching equipment. The maximum straight distance allowable between groundbars is 100 ft.
- Connect waveguide grounding kits to ground bars using Burndy (2) hole compression long barrel lugs — YA6C-2TC38 and TMH267 DURUM mounting hardware, YG14B-2TC2C2C for #2 solid to grounded buss.
- Connections to the ring ground shall be UL 467 listed. For direct burial, use Burndy HYGROUND™ products YGHP58C2W-2TN.
- Bond ice bridge supports to tower and equipment ring ground with Burndy YA3C-2TC38 lugs and YGHP58C2W-2TN grounding connectors for #2 solid.
- Each tower leg shall be grounded to the tower ring ground using YA3C-2TC38 lugs and UL-467-listed compression connectors — Burndy YGHP58C2W-2TN.
- Apply Burndy PENETROX® E oxide-inhibiting compound to all contact surfaces. Remove excess.



Catalog #	Description	Bolt Size	Hole Space	Die Color	Crimp Tool
(A) YA6C-2TC14	AWG #6 long barrel lug	1/4"	5/8"	Blue	Y1MR-TC
YA6C-2TC14E2	AWG #6 long barrel lug	1/4"	3/4"	Blue	Y1MR-TC
YA6C-2TC14E1	AWG #6 long barrel lug	1/4"	1"	Blue	Y1MR-TC
YA6C-2TC38	AWG #6 long barrel lug	3/8"	1"	Blue	Y1MR-TC
YA3C-2TC38	#2 solid long barrel lug	3/8"	1"	White	Y1MR-TC
YA2C-2TC38	#2 stranded long barrel lug	3/8"	1"	Brown	Y1MR-TC

Catalog #	Description	Crimp Size
(B) Y1MRTC	Full-cycle ratchet hand tool	#8, #6, #4, #2 solid, #2 stranded, #2 flex stranded lugs and #6 to #6 C-taps

Catalog #	Description	Die Set
(C) YGHP58C2W-2TN	5/8" – 1/2" ground rod to #2 solid – #6 solid copper, (1) continuous run and (1) tap or up to (2) taps may be connected	U997
(D) YGHC2C2	5/8" – 1/2" ground rod to: Run – #6 solid and #2 stranded, Tap – #6 solid and #2 stranded	U-C
(E) YG14B2TC2C2C	5/8" – 1/2" ground rod to 1/4" buss bar to (1) or (2) #2 solid / #2 stranded taps, suitable for use with either (1) or (2) conductors, for continuous uncut conductor applications	U1105

Catalog #	Description
(F) GAR3903TC	1 1/4" to 2" diameter pipe ground clamp to (2) 3/8" on 1" center lug

Catalog #	Description	Size
(G) PEN E-8	PENETROX® E oxide-inhibiting compound	8-oz. squeeze bottle

Catalog #	Description
(H) PAT750C18V	Multi-purpose crimping tool for use on tension sleeves, H-taps, C-taps, aerial cable, terminals, full tension splices and HYGROUND™ compression grounding connectors



Fig. 1

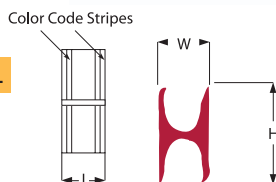


Fig. 2

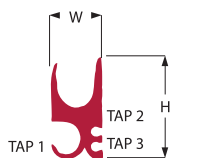


Fig. 3

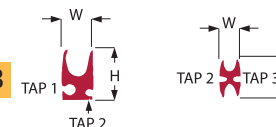


Fig. 4

Fig. 5



Connectors

TELECOMMUNICATIONS CONNECTORS

These connectors are the industry's first choice in compression connections. Burndy provides a complete selection of one- and two-hole compression lugs, terminals, H-taps, C-taps and other compression connection products, specifically engineered to meet the demanding applications of both the Central Office and wireless communications markets. Circumferential compression is solid and symmetrical, without a sharp "flash". The complete installation is fully inspectable and UL listed when installed with Burndy dies. The color code on the connector matches installation die. Every die in the system is color coded and provides die index embossment for complete inspectability.

Catalog #	AWG	Bolt Size	Hole Spacing
(I) YAV10-2TC10	#10-14	#10	5/8"
YAV10-2TC14	#10-14	1/4"	5/8"
YAV10-2TC14E2	#10-14	1/4"	3/4"
YAV10-2TC38	#10-14	3/8"	1"
YA8CL-2TC14	#8	1/4"	5/8"
YA8CL-2TC14E2	#8	1/4"	3/4"
YA8CL-2TC14E1	#8	1/4"	1"
YA6CL-2TC14	#6	1/4"	5/8"
YA6CL-2TC14E2	#6	1/4"	3/4"
YA6CL-2TC14E1	#6	1/4"	1"
YA6CL-2TC38	#6	3/8"	1"
YA4CL-2TC38	#4	3/8"	1"
YA2CL-2TC38	#2	3/8"	1"
YA25L-2TC38	1/0	3/8"	1"
YA26L-2TC38	2/0	3/8"	1"
YAV26L-2TC38-FX	2/0 FX	3/8"	1"
YA28L-2TC38	4/0	3/8"	1"
YAV28L-2TC38-FX	4/0 FX	3/8"	1"
YA31L-2TC38	350	3/8"	1"
YA34L-2TC38-FX	350 FX	3/8"	1"
YA34L-2TC38	500	3/8"	1"
YA38L-2NT38-FX	500 FX	3/8"	1"
YA39L-2NT38	750	3/8"	1"
YA44L-2NT38-FX	750 FX	3/8"	1"

H-TAP COPPER CRIMPIT™

- Accommodates a wide range of run/tap copper cable combinations, including both flexible and code combinations. All (B/B, B/I, I/B, I/I) combinations are acceptable.
- Recommended flame-retardant type CF-FR insulating covers meet oxygen index 28 and UL94 V-O requirements.
- "Third hand" constrains conductors while installer completes crimp.

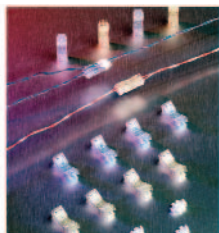
Catalog #	H-Tap Connector	Flame-Retardant Cover	Fig.#	Conductor Sizes Code I (Flex Cable)			
				Main	Tap1	Tap2	Tap3
(J) YH4444WC	YH4444	CFR-FR	1	1000-750 (750-500) (750)*	1000-750 (750-500) (350)*	—	—
YH4429WC	YH4429	CFR-FR	5	1000-750 (777-500)	250-2 (4/0-2)	—	—
YH3939WC	YH3939	CFR-FR	1	750-500 (550-500)	750-350 (550-350)	—	—
YH3931WC	YH3931	CFR-FR	2	750-350 (550-500)	4/0-1/0 (250-1/0)	1-6 str./sol. (1-8)	2-14 (2-14)
YH3434WC	YH3434	CFN-FR	1	500-250 (350-4/0)	500-4/0 (350-4/0)	—	—
YH3429WC	YH3429	CFN-FR	2	500-4/0 (350-4/0)	250/1/0 (4/0-1/0)	1-6 str./sol. (1-8)	8-14 (8-14)
YH2929WC	YH2929	CFD-FR	1	250-2 (4/0-2)	250-2 (4/0-2)	—	—
YH292CWC	YH292C	CFD-FR	3	250-2 (4/0-2)	2-6 str./sol. (2-8)	8-14 (8-14)	—
YH298CWC	YH298C	CFD-FR	3	250-2 (4/0-2)	8-14 (8-14)	8-14 (8-14)	—
YH2C2WC	YH2C2C	CFO-FR	4	2-6 str./sol. (2-8)	2-6 str./sol. (2-8)	8-14 (8-14)	8-14 (8-14)
YH6C6WC	YH6C6C	CFBG-FR	1	6-10 (6-10)	6-14 (6-14)	—	—
YH8C8WC	YH8C8C	CFBG-FR	1	8-14 (8-14)	8-14 (8-14)	—	—

*750 Flex, main, is the only wire that may be used with a 350 FLEX TAP in the YH4444 connector.

Supplier Prefix: BUN

Thomas & Betts

A



B



C



Supplier Prefix: TNB

Connectors

709 CONNECTORS

A single 709 quick-snap connector provides cost-effective, pair-at-a-time splicing. The single-pair connector design reduces the number of connectors and the size of the splice bundle, thus saving time, sleeve material and encapsulant. It's designed for in-line splicing, but the same connector can be used for half-tap splicing with the addition of the half-tap adapter.

Catalog #	Description	Quantity per Carton
(A) 709SC	Filled	200
709SD	Dry, flame retardant	200
709CD	Half-tap adapter for 709 connector	400

STA-KON® TERMINALS KIT

Tool-applied, solderless terminals and connectors with chamfered/funneled terminal barrel entry make wire insertion faster and easier. Its deep serrated interior insures a large area of contact, which lowers the resistance of a connection. Kit contains vinyl-insulated butt splices, ring terminals, locking fork terminals and disconnects for a range of wire sizes from 22-18 AWG through 12-10 AWG, plus wire marker book, crimping tool and 7½-in. Ty-Rap® cable ties.

Catalog #	Description	Weight
(B) STAKIT	Sta-Kon terminals kit	1 lb.

COLOR-KEYED® C-TAPS — UL AND CSA LISTED

Complete line of C-Taps are available for aerial, cable vault, underground and premise applications. Connect splice or tap; capacitor leads; solid, strand or ribbon; strand to strand; strand to copper ground wire; or copper ground to copper ground wire. Installed with easy to use hand tools.

Catalog #	Description	Color Key
(C) 54705	Splice or tap #12 AWG to #10 AWG	Red
54720TP	#6 AWG copper to #6 AWG copper	Brown
54715	Capacitor lead to #6 AWG	Grey
54725TP	#6 ribbon to #6 ribbon	Green
54750TP	⅜" strand or #6 AWG to ⅜" strand	Yellow

3M

Cable Management

3M™ SCOTCH™ VINYL ELECTRICAL TAPE

Scotch Super 33+ Vinyl Electrical Tape, Scotch 35 Vinyl Tape and Scotch Super 88 Vinyl Electrical Tape

- The tape far exceeds minimum agency requirements, with its all-weather tape design and UV resistance that resists weather abrasion and corrosion.
- Excellent adhesion and handling in all weather conditions makes the job easier and eliminates extra work.
- Highest quality in product category provides freedom from worry, is long-lasting and lowers maintenance costs.

Catalog #	Description
(A) 88-Super-3	¾" x 66' electrical tape
33Plus-Super	¾" x 66' plastic tape
35-Blue	¾" x 66' coding tape
35-Brown	¾" x 66' coding tape
35-Gray	¾" x 66' coding tape
35-Green	¾" x 66' coding tape
35-Orange	¾" x 66' coding tape
35-Red	¾" x 66' coding tape
35-Violet	¾" x 66' coding tape
35-White	¾" x 66' coding tape
35-Yellow	¾" x 66' coding tape

Supplier Prefix: MMM



Cable Management

TAK-TAPE™ HOOK AND LOOP STRIPS

- Thin and flexible, hook and loop fastener for cost-effective, general-purpose bundling
- Black, ¾-in. width, adjustable, releasable and reusable
- Large continuous roll, cut to size, speeds installation
- Wide strap distributes bundling forces over a large area and prevents cable damage.

Catalog #	Description
(A) TTS-20R	20' (6.1 m) continuous roll, .035" thickness, 40 lbs. minimum loop tensile strength*
TTS-35R	35' (10.7 m) continuous roll, .035" thickness, 40 lbs. minimum loop tensile strength*

*Minimum 2" overlap required to achieve loop tensile rating.

PAN-TY® CABLE TIES

PAN-TY cable ties are engineered with quality features designed to increase productivity and reduce your total cost.

- Low threading force, no sharp edges, finger-tip grip and curved tip
- Consistent quality, assured by tests conducted by military and independent testing labs
- One-piece construction — up to 250 lbs. minimum loop tensile strength

Catalog #	Description
(B)	General purpose nylon 6.6 (locking)
PLT2S-C*	7½" length, 1½" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100
PLT3S-C*	11½" length, 3" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100
PLT4S-C*	14½" length, 4" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100
	Weather resistant nylon 6.6 (locking)
PLT2S-C0	7½" length, 1½" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100
PLT3S-C0	11½" length, 3" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100
PLT4S-C0	14½" length, 4" maximum bundle diameter, 50 lbs. minimum loop tensile strength**, standard package quantity of 100

*Nylon 6.6 cable ties are available in colors (catalog # shown for natural).

**All tensile strength ratings are based on testing per Aerospace Specifications AS23190.

Supplier Prefix: PAN



Mounting Assemblies

PLASTIC MOUNTING PLATE BRACKETS

ERICO's MP series plastic mounting plate brackets offer the industry's widest application range. No installation tools or screws are needed to secure it to the wall. Available for up to 4-gang, low-voltage applications, the MP series is the only system that you'll need.

- Only CADDY provides the industry with the widest application range from ¼ in. to 1¼ in.
- Available in single-gang, double-gang and a unique 3- to 4-gang size
- Serrated interlocking system secures tight, and template points on brackets eliminate multiple measurement marking during installation.



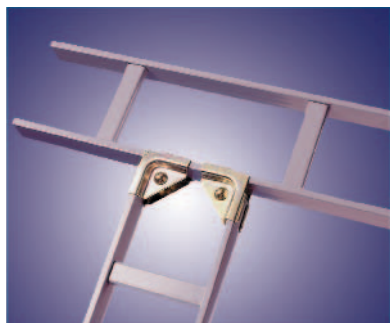
Catalog #	Description
(A) MP1P (replaces MP1)	Single-gang mounting plate
MPAL2	Double-gang mounting plate
PMP34P	3- or 4-gang mounting plate
MPLS	Single gang, screws to drywall (screws included)
MPLS2	Double gang, screws to drywall (screws included)

Supplier Prefix: ERI

NEWTON®

INSTRUMENT COMPANY

A



Racks

CABLE RACKS

Newton's cable rack and associated accessories are available in a variety of sizes, with connectors for any application. Customers can use Newton products to create straight-line runway installations with multiple changes in direction and elevation. All available sizes are not shown.

Catalog #	Description
(A) 0020030630	Cable rack, channel type: solid, 1½" x 12"
0020032130	Cable rack, channel type: tubular, 1½" x 12"
0020032230	Cable rack, channel type: tubular, 1½" x 15"
0020032330	Cable rack, channel type: tubular, 1½" x 18"
0020032630	Cable rack, channel type: tubular, 1½" x 24"
0020033630	Cable rack, channel type: solid, 2" x 12"
0020033730	Cable rack, channel type: solid, 2" x 15"
0020033930	Cable rack, channel type: solid, 2" x 20"
0020034130	Cable rack, channel type: solid, 2" x 24"
0020035130	Cable rack, channel type: tubular, 2" x 12"
0020040430	Cable rack, through type: solid, 1½" x 12"
0020040530	Cable rack, through type: solid, 1½" x 15"
0020040830	Cable rack, through type: solid, 1½" x 24"
0020041500	Cable rack pan, aluminum, for 15" cable racks
0020041800	Cable rack pan, aluminum, for 24" cable racks
0020043400	Cable rack pan, kydex PVC 10½" gray, for 12" cable racks
0020070630	Cable rack, 90° outside bend, channel type 12
0020120010	Cable rack junction, 1½"
0020120110	Cable rack junction, 2"
0020140110	T junction for cable racks, 2"
0020160110	Closing end of cable rack, 2"
0020170010	90° turn and junction cable rack
0020240030	Corner brace at turn of intersection, 1½"
0020240130	Corner brace at turn of intersection, 2"
0020310010	Cable rack elevation riser
0020470110	Supporting cable rack two-sided bar, from auxiliary frame or ceiling
0020520030	Power cable or auxiliary cable bracket, 1½"
0020520130	Power cable or auxiliary cable bracket, 2"
0020630210	Clip J bolt, attaching 2" cable rack to auxiliary framing channel
0020640210	Spanner J bolt, attaching 2" cable rack to auxiliary framing channel
0020650230	6" wall support bracket for attaching cable rack to wall
0020650630	12" wall support bracket for attaching cable rack to wall
0020670030	Ceiling hanger bracket with plate
0020780030	Clip for supporting 1½" cable rack to wall
0020850630	End closing bar 11¾" (multiple sizes available)
0021070011	Cable rack ring for signal wire, etc.
0021130210	Kit for insulating cable rack side bar, from parallel auxiliary frame channel
0021130310	Kit for insulating 2" cable rack side bar, from parallel auxiliary frame channel
0021140110	Kit for insulating 2" cable rack side bar, from top angle or wall angle
0021150010	Insulating junction for cable rack
0021170000	Rubber end cap, 1½" cable rack
0021170100	Rubber end cap, 2" cable rack
0021180010	Power and signal cable support assembly

B



EQUIPMENT RACKS

Newton provides a variety of equipment types including channel, unequal flange (standard or seismic rated) and network (standard or seismic rated). Sizes range from 3 ft. to 11 ft. 8 in., available in steel or aluminum, welded or bolted. Racks (drilled and tapped) are available in a variety of finishes. Rack accessories include guard rails, closing details, shelves, ground bars, rack adapters and mounting hardware.

Catalog #	Description
(B) 0040100730	7' double-sided equipment rack, floor supported, 19" x 1¾" mounting spaces
0040101030	9' double-sided equipment rack, floor supported, 19" x 1¾" mounting spaces
0040101330	7' double-sided equipment rack, floor supported, 19" x 1¾" mounting spaces
0040110130	7' double-sided equipment rack, floor supported, 23" x 1¾" mounting spaces
0040110730	7' double-sided equipment rack, floor supported, 23" x 1¾" mounting spaces
0040111330	7' double-sided equipment rack, floor supported, 23" x 1¾" mounting spaces
0041010131	7' unequal flange equipment rack, open duct, 19" x 1¾" mounting spaces
0041020131	7' unequal flange equipment rack, open duct, 23" x 1¾" mounting spaces
0040960131	7' unequal flange equipment rack, closed duct, 23" x 1" mounting spaces
0040980130	7' unequal flange equipment rack, closed duct, 23" x 1" mounting spaces

Supplier Prefix: NEW

(Continued on Page 13)

NEWTON[®]

INSTRUMENT COMPANY

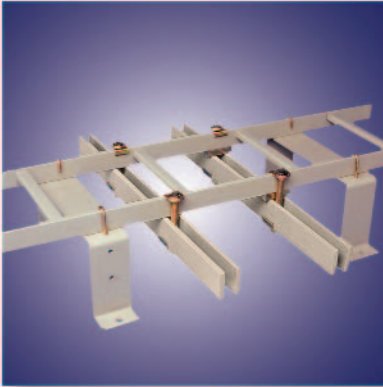
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EQUIPMENT RACKS (Continued)

Catalog #	Description
(B) 0046021131	7' seismic unequal flange equipment rack, closed duct, 23" x 1¾" mounting spaces
0040900130	3' double-sided economy equipment rack, 19" or 23" x ⅝", ⅝", ½" mounting spaces
0040490130	Equipment rack, cabling section, 7' H, 6" W, 6" D
0040190010	Equipment rack, free standing, floor-mounting hardware kit
0040271030	Panel, blank filler, for 23" mounting, five rack spaces high
0040280013	Ground bar for 19" mounting
0040320130	Equipment rack, adapter: 23" equipment rack with 1¾" mounting spaces to 19", 1¾" mounting spaces, one mounting space high
0040320210	Equipment rack, adapter: 23" equipment rack with 1¾" mounting spaces to 19", 1¾" mounting spaces, two mounting spaces high
0040320330	Equipment rack, adapter: 23" equipment rack with 1¾" mounting spaces to 19", 1¾" mounting spaces, three mounting spaces high
0040320530	Equipment rack, adapter: 23" equipment rack with 1¾" mounting spaces to 19", 1¾" mounting spaces, five mounting spaces high
0030040312	Screw, stainless steel, 12-24 x ½"
0040410330	Equipment rack, cable bracket, 4" length
0040410430	Equipment rack, cable bracket, 5" length
0040410530	Equipment rack, cable bracket, 6" length
0040410830	Equipment rack, cable bracket, 9" length
0040620430	Shelf, solid, for 19" mounting, 19½" depth
0040620890	Shelf, solid, for 23" mounting, 19½" depth
0040621030	Shelf, solid, for 27" mounting, 13½" depth
0040680330	Mounting bar kit for two horizontally mounted terminal blocks, 27" mounting
0040720130	Equipment rack, stand-off, 5" depth, one mounting space
0040720230	Equipment rack, stand-off, 5" depth, two mounting spaces
0040770130	Shelf, single-sided, solid, for 19" mounting, 10" depth
0041050231	23" unequal flange equipment rack, rear guard rail, 2" depth, with AC outlet cutout
0041070230	23" unequal flange equipment rack, rear guard rail, 2" depth, without AC outlet cutout
0041100010	Unequal flange equipment rack (non-seismic), floor-mounting hardware kit with expansion shield
0041190110	Unequal flange equipment rack, 12 tie bars for 84" or 90" rack
0043560100	Paint, touch-up, brush-on, Telco gray (finish code 30)
0046150210	Equipment rack, floor-mounting hardware kit, seismic, with four HSLB M12-25 expansion anchors

C



Framing

AUXILIARY FRAMING

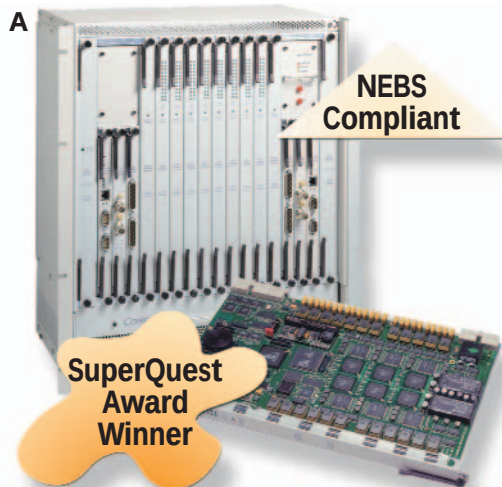
Newton provides a complete line of auxiliary framing products, including channel and bar type in various sizes. A full range of accessories with installation hardware for overhead (superstructure) and floor support is also available.

Catalog #	Description
(C) 0010210530	Auxiliary framing bar, 2" x ⅝", 10' length
0010220130	Auxiliary framing channel, 2" x ⅝", 2' length
0010220230	Auxiliary framing channel, 2" x ⅝", 4' length
0010220330	Auxiliary framing channel, 2" x ⅝", 6' length
0010220430	Auxiliary framing channel, 2" x ⅝", 8' length
0010220530	Auxiliary framing channel, 2" x ⅝", 10' length
0010220630	Auxiliary framing channel, 2" x ⅝", 12' length
0010221030	Auxiliary framing channel, 22" x ⅝", 20' length
0010221050	Auxiliary framing channel, 22" x ⅝", 20' length
0010230010	Auxiliary framing bar, 2" x ⅝", junctioning end to end with splice clamp
0010240010	Auxiliary framing bar, 2" x ⅝", T junction using corner clamps
0010250110	Auxiliary framing channel, 2" x ⅝", supported by ⅝" threaded rod
0010280110	Auxiliary framing channel, 2" x ⅝", finishing clip
0010290010	Auxiliary framing bar, 2" x ⅝", cross-over using clip
0010290110	Auxiliary framing channel, 2" x ⅝", cross-over using clip
0010300110	Auxiliary framing channel, 2" x ⅝", junctioning end to end with bolted clamp
0010360110	Auxiliary framing channel, 2" x ⅝", attaching to equipment rack top angle (without pipe) by V bolt
0010540110	Auxiliary framing channel, 2" x ⅝", insulated from equipment rack top or wall angle
0010550430	Pipe stand, 2" diameter, with insulating pad, for use with auxiliary framing bar or channel, 9' height
0010580000	Rubber finishing cap for auxiliary framing bar
0010580100	Rubber finishing cap for auxiliary framing channel
0010200130	Auxiliary framing channel, 2" x 1" x ⅝", floor supported by 2" x 2" x ¼" support
0010430130	Floor support, 2" pipe stand, 7' for auxiliary channel

Supplier Prefix: NEW



COPPER MOUNTAIN
Intelligent Broadband Access Solutions



DSL Electronics

COPPEREDGE® 200 DSL CONCENTRATOR

The CopperEdge 200 DSL concentrator allows service providers to leverage existing copper wire infrastructure to deliver lucrative broadband services.

- Global carrier-class product line, proven in some of the world's largest DSL deployments
- Multi-layer networking supports Frame Relay, ATM and IP to offer easy provisioning and delivery of IP services.
- CopperCompatible™ program offers proven interoperability with a broad range of CPE, IADs and voice gateways.
- Wide range of high-density interfaces including: ADSL, G.lite, G.shdsl, IDSL, SDSL and T-1
- Integrated 10/100Base-T interface and optional WAN modules allow service providers to select the most cost-efficient transport: OC-3 ATM, DS-3 ATM, T-1/E-1 IMA, T-1 Frame Relay and V.35 Frame Relay.
- Feature-rich CopperView® network management system and graphical point-and-click interface
- Key applications: Internet access, voice, video, Frame Relay, VPN

Catalog #	Description
(A) 200-010-10	CE200 base system
120-021-10	24-port SDSL line module
120-030-10	24-port IDSL line module
120-040-10	24-port G.lite line module
120-050-10	24-port full-rate ADSL line module
120-055-00	24-port G.shdsl line card
120-060-10	12-port T-1 line module
112-500-00	CopperView 1-9 nodes
130-020-10	V.35 WAN module
130-040-10	DS-3 ATM WAN module
130-050-10	Quad T-1 frame WAN module
130-060-10	T-1/E-1 IMA WAN module
140-020-00	OC-3c/STM-1 WAN module (singlemode)
140-025-00	OC-3c/STM-1 WAN module (multimode)

Supplier Prefix: CPM



Channel Banks

INTELEFLEX® CHANNEL BANK ASSEMBLY

Inteleflex is an advanced network transmission product that can significantly increase the capacity of access networks. The Inteleflex system consists of two basic elements — the Central Digital Terminal (CDT), located in the Central Office, and the Remote Digital Terminal (RDT), located at the far end.

The 19-in. channel bank assembly may be deployed as either a CDT or RDT and to accommodate a maximum of 2,016 channels per system. Each 19-in. channel bank assembly has 24 slots — two power supply slots, two central processing slots and 20 general purpose slots serving as a 144-line network node providing multiple services. The Inteleflex platform provides a migration path for the communication provider from copper to fiber, circuit to packet and any combination of network elements.

The system is designed with a high-speed hybrid TDM/Cellbus® backplane, inter-shelf connectivity and shared system intelligence. The Inteleflex system optimizes bandwidth by means of proprietary bandwidth management technology. Revolutionary proprietary algorithms result in 40 subscribers, simultaneously off-hook, over a single twisted copper pair and 80 over a single T-1.

Catalog

- (A) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: TST

The Service Provider

Solutions Guide

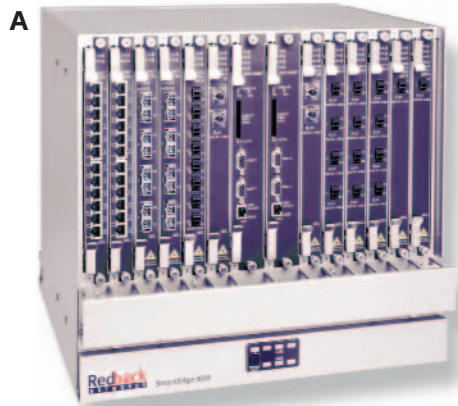
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Routers

SMARTEDGE™ 800

The Redback® SmartEdge 800 router is built from the ground up, with a highly redundant architecture for both hardware and software which is required for high availability. In addition, the SmartEdge 800 router provides unmatched scalability from both a port density standpoint and support for new protocol requirements. The SmartEdge 800 router enables advanced IP edge aggregation capabilities with a variety of options for Virtual Private Networks (VPNs), including BGP/MPLS, GRE tunneling and Layer 2 switching. The SmartEdge 800 router's support of virtual interfaces allows customers to be easily switched between different types of VPNs.



Catalog #	Description
(A) CHS-SE8-ENH	SmartEdge 800 chassis, enhanced, includes both 19" and 23" brackets, fiber management kit and cover
XC-SE8-TDM	Cross-connect/controller card for TDM, only supports TDM functions, no packet cards are supported with this XC
OIM-SE8-OC48DWDWM21FC	OC-48/STM-16 DWDM optics card with FC - Channel 21 (1560.61 nm)
TIM-SE8-28DS1-2	28 x DS1 interface card, version 2, enhanced
EIM-SE8-2GE	2 x Gigabit Ethernet transport card, Redback certificate GBICs required
EIM-SE8-4FE	4 x 10/100 Ethernet transport card, Ethernet card maps 10Base-T into an STS-1, 100Base-T into an STS-3c
SW-SE8-1.3	SmartEdge 800 release 1.3 base software RTU
KIT-SE8-CHASSIS	SE 800 chassis accessories kit includes: RedROM CD, node manager and NetOp client on CD-SE800, craft console cable, craft serial port-to-modem "Y" cable, Ethernet crossover cable, engineering release notes, anti-static wrist strap and a BNC extraction tool
KIT-SE8-AIRRAMP	SE 800 air ramp kit includes: one air ramp, two air ramp brackets and screws for 19" bay, two air ramp brackets and screws for 23" bay and four air ramp mounting bracket screws
BLANK-SE8-STD	Filler card, standard slot — filler cards needed in all empty slots
BLANK-SE8-XC	Filler card, cross-connect slot — filler card needed for empty XC slots (unprotected XC implementation only)
BLANK-SE8-5SLT	Filler card, five slots — five-slot card to more cost-effectively fill five adjacent slots

Aggregation Devices

SUBSCRIBER MANAGEMENT SYSTEM™ 500

The Redback Subscriber Management System (SMS) 500 is a powerful, highly intelligent networking device. It bridges the operational gap between high-speed access equipment in the Telco Central Office or cable/wireless head-end and service provider backbone routers. Deployed by network service providers at a Point of Presence (POP), the SMS 500 accepts a large concentration of high-speed data traffic from such devices as DSL Access Multiplexers (DSLAMs), Cable Modem Termination Systems (CMTs) and wireless head-ends. The SMS 500 applies scalable user configuration and management to the data streams. It then grooms the traffic for service provider backbone routers by offloading the routers of the intensive processing that could create bottlenecks in high-speed networks.

- Scalable port density, transmission speeds and reach
- Production proven — Redback SMS 500 has been used in production networks worldwide by leading carriers and service providers.
- Integrated broadband support — One system provides for integrated xDSL, cable, FTTC, leased-line aggregation and wireless support.
- Ease of provisioning — The SMS 500 has rapid time to market through RADIUS integration and standard management interface.
- Dynamic service selection — It allows customer selection of a variety of provider-offered services.



Catalog #	Description
(B) SYS-SMS500-0V2	System bundle includes: 500 chassis, one DC power supply (PS-500-DCV2), CE-500, FE-500, 110/110 Ethernet (six rack units) I/O port, AOS 1,000 subscriber license

Supplier Prefix: RDB

The Service Provider
Solutions Guide

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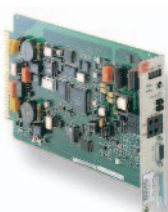
Fiber/Copper Multiplexers

THINMUX™ MULTIPLEXERS

ADC's ThinMux product family helps carriers build today's access networks to easily adapt to meet tomorrow's needs. It is one of the smallest multiplexers on the market and provides a single platform to encompass many universal standards (SONET/SDH, DS3 and T-1/E-1). ADC's ThinMux enables carriers complete flexibility in delivering unique T-1/E-1 or mixed services without additional provisioning, servicing, inventory or training with investment. The ThinMux has interchangeable DS3 and STS-1 multiplexer options, software-configurable mixed T-1 and E-1 services, a forced-air cooling unit and a backplane craft port. The enclosure fits into a 19-in. Central Office rack.

Catalog #	Description
(A) THMX-STS1	ThinMux STS-1 multiplexer kit (contains ACE-COML1 enclosure with fans, two ADC HXU-359 STS-1 multiplexers and ACE-MK mounting hardware)
THMX-DS3	ThinMux DS3 multiplexer kit (contains ADC-COML1 enclosure with fans, two ADC HXU-360 DS3 multiplexers and ACE-MK mounting hardware)
HXU-359 L1	ThinMux STS-1 mux card
HXU-360 L1	ThinMux DSX3 mux card

B



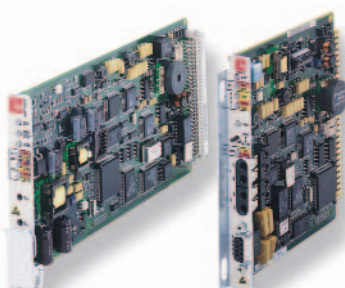
DSL Electronics

HDSL

ADC carries two lines of HDSL products — Soneplex and HiGain. The Soneplex T-1 provides a flexible, end-to-end solution saving carriers money on T-1-based services over copper or fiber. It uses HDSL, HDSL2, HDSL4, traditional T-1 repeater or optical DS2 technology in a single platform, which features advanced network management capabilities, circuit visibility, remote provisioning and network control. The HiGain supports industry-standard HDSL in 220, 3192 and DDM+ mechanics enclosures, as well as ADC HiGain chassis.

Catalog #	Description
(B) SPX-2200B41	Soneplex HDSL 220 Central Office module
SPX-HLXCE1	Soneplex HDSL Central Office module
SPX-2200B41	Soneplex HDSL 220 Central Office module
SPX-3192B41	Soneplex HDSL 3192 Central Office module
SPX-DDM0A1	Soneplex HDSL DDM+ Central Office module
SPX-HLXRE41	Soneplex HDSL remote module
HLXR319A1	Soneplex HDSL 3192 remote module
SPX-HRPT0B3	Repeater module for Soneplex systems (239 mechanics)
SPX-HRX819B3	Soneplex repeater module for AT&T 819 or 809 outdoor enclosures
SPX-HRXP0B3	Self-enclosed, easy-to-deploy HDSL repeater module
SPX-RLXIOR0A3	T-1 repeater module (RLXIOR) for Soneplex systems

C



HDSL2

ADC carries two lines of HDSL2 products — Soneplex and HiGain. ADC's HDSL2 gives service providers another option for delivering traditional T-1 services over a single unconditioned, non-loaded copper pair for up to 12,000 ft. The HDSL2 enables carriers to extend the life of their existing copper plants and to reduce the need for burying new cable. It meets ANSI T1E1.4 standards, is NEBS-Level 3 compliant and operates in ADC's Soneplex chassis — providing enhanced network management capabilities, circuit visibility, remote provisioning and network control. Other features include: span-powered remote units, GR-1089 compliance, 1+1 protection, metallic loop qualification and repeaters. ADC also offers HiGain HDSL2 Central Office and remote modules that operate in industry-standard Central Office and remote chassis.

Catalog #	Description
(C) SPX-H2LXCB1	Soneplex HDSL2 Central Office module
SPX-H2LXCMLQ2	Soneplex HDSL2 Central Office module with metallic loop qualification
SPX-H2LXRB1	Soneplex HDSL2 remote module
SPX-H2RXB1	Soneplex HDSL2 repeater/line doubler
H2TU-C-231-L1	HiGain HDSL2 Central Office 220 line unit
H2TU-C-319-L1	HiGain HDSL2 Central Office 3192 line unit
H2TU-C-388-L1	HiGain HDSL2 Central Office DDM+ line unit
H2TU-R-402 L4	HiGain HDSL2 remote terminal line unit 200 mechanics, local/line powered, ADA performance monitoring
H2TU-R-402-L1	HiGain HDSL2 remote terminal line unit 200 mechanics, local/line powered
H2TU-R-402 L1A	HiGain HDSL2 remote terminal line unit 200 mechanics, line powered
HHS-319	HiGain Central Office shelf, horizontal 3192 mechanics, three slots
HHS-319	HiGain Central Office shelf, horizontal 3192 mechanics, three slots

Supplier Prefix: ADC

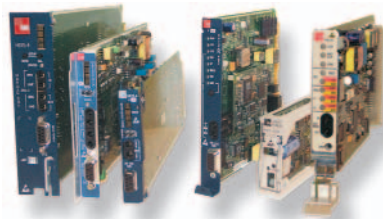
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D



HDSL4

ADC's HDSL4 gives service providers the optimum solution for delivering T-1 services to customers beyond CSA range (12,000 ft./24 AWG). ADC's HDSL4 extends DS-1 transmission up to 16kft. without repeaters or up to 46kft. with repeaters over two unconditioned copper pairs on 24 AWG. With line-powered repeaters and remote, ADC's HDSL4 maintains spectrum compatibility with ADSL, while supporting even greater reach via a three-span circuit. The extended reach of HDSL4 enables customers to service more subscribers with less equipment.

Catalog #	Description
(D) SPX-H4LXCA1	HDSL4 Soneplex Central Office module
H4TU-C-231-L1	HDSL4 220 Central Office module
H4TU-C-319-L1	HDSL4 3192 Central Office module
H4TU-C-388-L1	HDSL4 DDM+ Central Office module
H4TU-R-402-L1	HDSL4 200 remote module
H4D-409-L1	HDSL4 239 doubler module

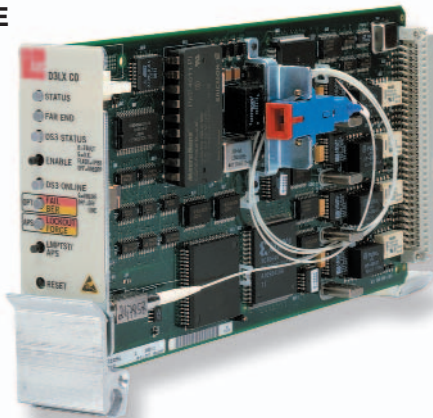
Fiber Loop Extenders

D3LX

The D3LX fiber optic loop extender is ADC's next-generation DS-3 optical transport module. It uses single-fiber optical laser transport (1310/1550 nm) WDM technology to double a carrier's fiber capacity in a variety of applications. The D3LX is nearly one-third the size of ADC's DS3FLC, providing three times the circuit density in the same rack space. The D3LX features: 1+1 protection switching, 13dB optical link budget, Central Office and remote alarms. It also supports seven protected or 14 unprotected modules in the Soneplex loop extender chassis, and is environmentally hardened for Central Office and remote applications. The D3LX is an ideal solution for carriers delivering ATM or TDM DS-3 services to remote locations.

Catalog #	Description
(E) D3LXC-FCA100	D3LX Central Office module, FC connectors
D3LXC-SCA100	D3LX Central Office module, SC connectors
D3LXR-FCA100	D3LX remote module, FC connectors
D3LXR-SCA100	D3LX remote module, SC connectors

E



Power Distribution Products

POWERWORX® POWER DISTRIBUTION PRODUCTS

Designed to power and protect network elements in broadband networks, ADC's PowerWorx fuse panels hold a lifetime warranty and are NEBS-Level 3 certified. With input power up to 65A per bus, the traditional GMT series accommodates up to 15A of output power per fuse position. A self-configuring voltage and polarity feature allows a single panel to support most +/-24VDC or +/-48VDC applications. For high amperage applications, or for applications where a combination of fuse types are required, the Select series fuse platform accepts high-input power — up to 100A per bus — with up to 50A output power. TPA, KLM, TPM and GMT fuses can be mixed within the same one-rack-unit panel for maximum flexibility.

F



Catalog #	Description
(F) PWX-001RGCD10PWDP	Traditional GMT, standard, 65A bus, lug in/screw down out, 10/10, dual power, power and fuse LED, WW alarm, putty
PWX-001RGCD10PSDB	Traditional GMT, standard, 65A bus, lug in/screw down out, 10/10, dual power, power and fuse LED, screw down alarm, black
PWX-001RGCD10PWDB	Traditional GMT, standard, 65A bus, lug in/screw down out, 10/10, dual power, power and fuse LED, WW alarm, black
PWX-001RGCD10FWDP	Traditional GMT, standard, 65A bus, lug in/screw down out, 10/10, dual power, fuse-alarm LED, WW alarm, putty
PWX-001RGCD10FSDB	Traditional GMT, standard, 65A bus, lug in/screw down out, 10/10, dual power, fuse-alarm LED, screw down alarm, black
PWX-041RCK4G4YSPSP	Select series fuse, standard, 100A bus, lug in/screw down out, dual power, 4 x KLM 4 x GMT per bus, power and fuse LED, screw down alarm, putty
PWX-041RCK4XXYSPWP	Select series fuse, standard, 100A bus, lug in/screw down out, dual power, 4 x KLM per bus, power and fuse LED, WW alarm, putty
PWX-041RCA4G4YSPWP	Select series fuse, standard, 100A bus, lug in/screw down out, dual power, 4 x TPA 4 x GMT per bus, power and fuse LED, WW alarm, putty

Supplier Prefix: ADC

Lucent Technologies

Business Partner



A

**SONET Multiplexers****METROPOLIS® DMX ACCESS MULTIPLEXER**

This product enables multiservice growth from traditional voice/private line services to a hybrid mix of voice/private line and data/packet transmission services with its integration of Ethernet (10/100/1,000Mbps) and SONET functionality into a single, compact platform. The Metropolis DMX Access Multiplexer is part of the comprehensive Lucent Technologies optical portfolio, providing end-to-end optical solutions for metro and long-haul networks

Catalog #	Description
(A) 109150946	Circuit pack, LNW121, OC-48, 1, telephone transmission systems
848540464	Shelf assembly, WaveStar® DMX 2.5Gbps, aluminum
848548277	Cable assembly, coaxial, connectorized, 50', 848540464, DMX 2.5Gbps/10Gbps

B

**METROPOLIS DMXPRESS**

Use this optical "last mile" platform for provisioning bandwidth to customer premises equipment or the edge of the metro network. It provides low-cost, high-capacity access multiplexing that helps lower the cost of Ethernet over SONET. Metropolis DMXpress provides traditional voice and Time Division Multiplexer (TDM) services, as well as next-generation data services, all on one compact platform.

Catalog #	Description
(B) 108951062	Circuit, A1AA005, OC48/1.312 optical pack T/R, 5V, 1 UN, 9.84252
848834560	Shelf assembly, Metropolis DMXpress, shelf factory assembly
848837878	Cable assembly, interconnecting, connectorized, 20', 848816468

C

**DDM-2000 SONET MULTIPLEXERS**

This family of SONET multiplexers supports a range of network configurations: point to point, linear drop, hubbing, add/drop and self-recovering path-switched rings. DDM-2000 systems run a variety of applications and expand smoothly as network topology grows more complex.

Catalog #	Description
(C) 107043945	Circuit pack, BBG4, 48V, 1, DDM-2000
106926595	Circuit pack, transmission, DDM-2000 OC-12, regenerator, LTWV, 22D-U, S1:2
601808207	Shelf assembly, wired, DDM-2000, OC-3 shelf, with user manual, ED8C724-30G4, B

D

**DSL Electronics****STINGER® MICRO-REMOTE TERMINAL (MRT)**

Deliver DSL services to remote and underserved communities with the Stinger MRT. It is an ideal solution for space-constrained applications, such as remote terminals or multitenant units. It is mountable in 19- and 23-in. racks, and can be deployed in an existing stand-alone cabinet configuration, integrated with a Digital Loop Carrier (DLC) or prepackaged for a complete outside plant solution.

Catalog #	Description
(D) 300428240	MRT-AD-36S-4T1-IMA model STGRMRT 23" base unit with 4-port T-1/IMA
(E) 300428257	MRT-AD-36S-8T1-IMA model STGRMRT 23" base unit with 8-port T-1/IMA

E



Supplier Prefix: LUE

The Service Provider

Solutions Guide

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E



STINGER® LS DSL ACCESS CONCENTRATOR

A high-capacity, ATM-based access concentrator for DSL services, the Stinger LS is a smaller version of the original Stinger FS chassis. Stinger LS is available in two models: model one is designed to fit 19-in. racks in worldwide markets and supports up to 240 DSL ports, whereas model two is designed to fit the 23-in. racks used primarily in U.S. markets and supports up to 336 ports.

Catalog #	Description
(E) 300431251	One 48-port ADSL LIM with one 8-port T-1/IMA bundle
300431269	SDSL/T-1 bundle — one 48-port SDSL LIM with one 8-port T-1/IMA bundle
300431277	ADSL/T1000 bundle with DS3 — one 48-port ADSL LIM with one T1000 and DS3 bundle

F



ATM Switches

PACKETSTAR® (PSAX) MULTISERVICE MEDIA GATEWAYS

Push broadband services beyond the core to the edge of the network. These highly scalable platforms optimize existing network infrastructure to help deliver carrier-grade access for voice, video and data applications through circuit emulation, frame relay, IP and ATM services. The PSAX family of products integrates well into existing networks for numerous operational efficiencies, including simple access concentration, circuit-to-packet migration via a softswitch, VoDSL gateway functionality via Gr-303/V5.2 and managed services applications. PSAX reduces operational and capital expenditures by using a single platform in multiple network environments, thereby reducing inventory, spares and training costs.

Catalog #	Description
(F) 300420254	21P02 redundant PSAX 1250, 19" rack mount, base system with -48VDC power
300420262	21P04 redundant PSAX 1250, 23" rack mount, base system with -48VDC power
300419504	24P02 redundant PSAX 2300, 19" base system with -48VDC power
300331899	45N05 PSAX 4500 Stratum module
300331915	45P02 fully redundant PSAX 4500 with Stratum and power supply

G



Central Office Class 5 Switch

5ESS® SWITCH

The 5ESS switch provides the flexibility, scalability and reliability networks and businesses need to be successful in today's ever-changing marketplace. In addition to traditional telephony services, new applications have been introduced to meet growing demands for asset reuse, interoperability and shared resources, including OIU-TDM, IP Centrex, Internet-based call center and wireless support. The 5ESS switch is at the core of Lucent Circuit to Packet (C2P™) Solutions that allows migration to a converged network while preserving existing revenue streams, processes and technology investments.

Catalog #
(G) For a list of catalog numbers, contact your local Graybar representative.

PARADYNE®

DSL Electronics**BITSTORM™ 2400 IP DSLAM**

The BitStorm 2400 is a new stackable Internet Protocol Digital Subscriber Line Access Multiplexer (IP DSLAM) that simplifies broadband delivery with fiber and copper Gigabit Ethernet (GigE) uplinks and stacking capabilities. The small one-rack-unit BitStorm 2400 provides 24 dedicated 10Mbps EtherLoop ports with true plug-and-play ease of installation. Configurations can quickly scale in fault-tolerant, non-blocking configurations by stacking multiple units while sharing one or more GigE uplinks. This is a true carrier-class platform with high reliability and SNMP-based management by the StormTracker™/GrandVIEW™ EMS.

Catalog #	Description
(A) 2461-A1-420	24-port 10Mbps EtherLoop with 2 GigE, universal AC
2461-A1-520	24-port 10Mbps EtherLoop with 2 GigE, -48VDC
01-00128-01	StormPort 1020 10Mbps EtherLoop modem

BITSTORM 4800 IP DSLAM

The BitStorm 4800 is the ideal solution for in-building broadband deployment. It provides 48 ports of standards-based ADSL in a compact one-rack-unit form factor, making it ideal for use in small equipment rooms or wiring closets. Each port delivers throughput up to 8Mbps, enabling a wide variety of interactive applications. It supports inexpensive, off-the-shelf ADSL modems and provides dual GigE interfaces and flexible plug-in WAN modules.

Catalog #	Description
(B) 4821-A1-441	48-port ADSL, universal AC, dual GigE interfaces, V.35/X.21 WAN module
4821-A1-442	48-port ADSL, universal AC, dual GigE interfaces, management module
4821-A1-421	24-port ADSL, universal AC, dual GigE interfaces, V.35/X.21 WAN module
4821-A1-422	24-port ADSL, universal AC, dual GigE interfaces, management module

GRANDSLAM™ 4200 STACKABLE ATM DSLAM

Paradyne's GrandSLAM 4200 family provides service providers with an economical way to deliver high-speed broadband to all of their subscribers, regardless of whether the customer is located in a rural location, served from remote cabinets or in the heart of a metropolitan area. The GrandSLAM 4200 comes in both ADSL and ReachDSL™ versions. Using the GrandSLAM 4210 with the Hotwire® ReachDSL, the service provider can bring reliable, low-cost broadband access to markets previously unreachable by traditional DSL services.

Catalog #	Description
(C) 4220-A1-530	24-port ADSL, -48VDC, with splitters, various uplinks available
4211-A1-530	24-port ReachDSL, -48VDC, with splitters, T-1 uplink
4213-A1-530	24-port ReachDSL, -48VDC, with splitters, T-1/E-1 IMA uplink
6390-A1-200	ReachDSL 2.2 modem

GRANDSLAM 8820 DSLAM

The GrandSLAM 8820 DSLAM delivers outstanding flexibility, supporting the widest range of business and residential services, with support for standard ADSL, ReachDSL, SHDSL and a wide range of other xDSL and TDM technologies in a single, cost-effective platform. With more than 23,000 deployed worldwide, the 20-slot GrandSLAM 8820 supports multiple ATM network interfaces, including DS3, OC3 and T-1/IMA. This allows service providers to see the most economical solution for their specific regional or subscriber requirements.

Catalog #	Description
(D) 8820-A2-500	GrandSLAM 8820 multiservices DSLAM, -48VDC with top fan tray
8355-B1-000	24-port ReachDSL 2.2 ATM line card
8365-B1-000	12-port ATM ADSL (DMT/G.lite selectable by port) line card
8312-B4-011	12-port ReachDSL line card with Ethernet uplink
8799-B1-000	8-port G.SHDSL E-1/Nx64 TDM line card
7995-A1-401	TDM/SHDSL endpoint
6350-A4-200	6350 ReachDSL modem

Supplier Prefix: PAD

The Service Provider

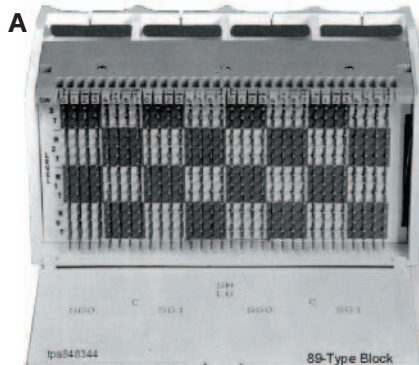
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BUSINESSPARTNER

AUTHORIZED DISTRIBUTOR

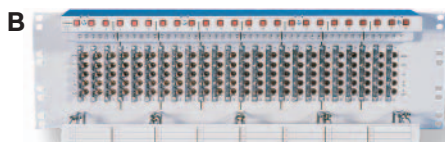


Connecting Block Panels VOICE FREQUENCY SYSTEMS

Avaya is a leading global provider of communications solutions and services, with more than 100 years experience supporting the apparatus and cable needs of both service provider and enterprise networks. Avaya products provide the highest levels of performance and reliability for DS0 voice grade needs and DS-1, E-1, DS-1C, DS-3 and STS-1 digital network operations needs

Catalog #	Description
(A) 89-type connecting blocks	
103666699	89E1A-128 PR
103751707	89F1A-100 PR
103759528	89F1B-100 PR
104024757	89E1-128 PR
104024765	89F1C-100 PR
104024773	89F1F-100 PR
104040753	89E1A-150 PR
104164835	89E1C-200 PR
300 series Central Office connectors	
103046132	303E3-100
103111852	308A1-100-100'
103283503	308E2-100
103318309	307D1-100
103550679	308E1-100
103551867	310E1-100
103749594	310TB-E1-100
103760872	310A2-100-30'
103760880	310B2-100-30'
103835120	307C2-100
103868980	310A2-100-80'
103869004	310A2-100-150'
103869012	310A2-100-200'
103869020	310B2-100-50'
103869038	310B2-100-80'

Catalog #	Description
(A) 300 series Central Office connectors (continued)	
103869061	310B2-100-200'
103900098	303B4-100-100'
104401591	310M-E1-100
105267454	310M-A1-100-50'
105267462	310M-A1-100-80'
105267470	310M-A1-100-100'
105267488	310M-A1-100-150'
105267496	310M-A1-100-200'
105267504	310M-B1-100-50'
105267512	310M-B1-100-80'
105267520	310M-B1-100-100'
105267538	310M-B1-100-150'
Connecting blocks for COSMIC frames	
102371796	78C1A-100 PR
103288189	112C1A-100 PR
103288213	112C1B-100 PR
Central Office protector units	
103626016	4B12C
105605620	4C1FS
105605646	4C3FS
107213399	3C1FS
107213415	3C3FS



Cross-Connect Panels DIGITAL DISTRIBUTION FRAMES

Catalog #	Description
(B) 800/900 series DSX-1 digital cross-connect system	
104198247	800B1-A1 DSX
104198254	800B1-A2 DSX
104366927	800H/12 patch cord
104394648	800A2-A1 DSX
104394689	800G2-A1 DSX-1 panel
104394713	800G2-C1 DSX-1 panel
106503717	800B1-A4 connection block
106503733	800G2-E4 panel
106568736	800E1-A2
106957293	800G2-E4/BP panel
105774012	800HD/3
104434071	900G2-A1 DSX-1 panel
104434089	900G2-C1 panel
ED6C15230G12	800/900 DSX-1
ED6C15231G5	900 DSX
Bantam Plus DSX-1 cross-connect panel	
108312414	Rear/rear panel

Catalog #	Description
(B) Series III DSX-3/4 digital cross-connect system	
105489777	DSX-3/4A1-24/7BNC panel
105489835	DSX-3/4F1-24/7BNC panel
105489850	DSX-3/4A1-BNC connector
105649990	32A1 power panel
105743777	DSX-3/4A1-6/2 panel
105983811	DSX-3/4P1A-02-440 cord
106228836	DSX-3/4P2A-02-440 cord
106228844	DSX-3/4P2A-04-440 cord
108663139	PNL-DSX-3/4-F2-36/7-BNC
700201841	DS-3 48-circuit tie panel
Digital distributing frame with dual monitor	
107917163	DDF-DM module
107970543	DDF-DM 32-circuit panel
Frame hardware	
ED6C17230G1	DSX-3/4 12" network bay
ED6C17230G4	DSX-3/4 7" X 5" vertical
ED6C17230G6	DSX-3/4 9½" X 5" vertical
ED6C17230G7	DSX-3/4 7" endguard

Supplier Prefix: AVA

The Service Provider
Solutions Guide

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CHATSWORTH
PRODUCTS, INC.

A



Cabinets

ISP CO-LOCATION CABINET SYSTEM

The ISP co-location cabinet system extends the benefits of the MegaFrame® cabinet system to co-location customers with smaller amounts of equipment. Each cabinet provides three compartments, each having a secure vertical cable tray management trough and two locking quick-release doors. They are individually keyed and contain a draw-through fan and a power strip.

- Overall dimensions: 27 $\frac{7}{10}$ -in. wide x 39 $\frac{3}{5}$ -in. deep x 84 $\frac{9}{10}$ -in. tall (without casters)
- 1,600 lbs. of equipment support without casters (1,000 lbs. with casters)
- System includes top panel, two side panels, leveling feet and floor-attachment clamps.
- Each compartment includes two pairs of adjustable-depth equipment-mounting rails.
- Mounting rails support 19-in.-wide rack-mount equipment.
- Each compartment provides 14 vertical rack-mount spaces.
- Equipment-mounting rails adjust between depths of 3 in. and 36 in.
- Mounting rails are square punched with the EIA-310-D universal hole pattern.
- Mounting rails will accept #12-24, #10-32 and M6 cage nut hardware.
- Front doors have a vented semi-transparent plexiglass panel.
- Rear doors have a perforated metal panel.
- Doors are lockable, reversible to open right or left and interchangeable front to rear.
- Cabinet and door frames are anodized aluminum extrusion, metallic.
- Top, door and side panels are powder-coat painted aluminum sheet, black.

Catalog #	Description
(A) E3053-732	ISP co-location three-bay full cabinet, 19" W x (3 x 14 rack units) x 36" D, fully assembled
12637-001	Equipment installation hardware, #12-24 cage nuts and screws, 25 pack, gold
12638-001	Equipment installation hardware, #10-32 cage nuts and screws, 25 pack, silver
12639-001	Equipment installation hardware, M6 cage nuts and screws, 25 pack, black
12475-001	Caster set, 3" diameter, full swivel, lockable, zinc
12518-519	Stabilization kit, 19"-wide cabinets, metallic
11054-519	Double-sided shelf, 26" deep, 150-lb. load, metallic

B



MEGAFRAME® CABINET SYSTEM

The MegaFrame cabinet system is the best choice when large amounts of cable must be managed within a secure enclosure. Every MegaFrame cabinet has integrated space for cable management along both sides of the equipment storage space. It provides cable access through an open base and pre-punched edge-protected ports in the top panel.

- Overall dimensions: 27 $\frac{7}{10}$ -in. wide x 39 $\frac{3}{5}$ -in. deep x 84 $\frac{9}{10}$ -in. tall (without casters)
- Provides 1,600 lbs. of equipment support without casters (1,000 lbs. with casters)
- Includes two pairs of adjustable-depth equipment-mounting rails
- Includes one, full-height, adjustable-depth, vertical, cable-management ring section
- System includes top panel, two side panels, two locking quick-release doors, leveling feet, baying kit and floor-attachment clamps.
- Provides 45 vertical rack-mount spaces for 19-in.-wide rack-mount equipment
- Equipment-mounting rails adjust between depths of 3 in. to 36 in.
- Mounting rails are square punched with the EIA-310-D universal hole pattern.
- Mounting rails will accept #12-24, #10-32 and M6 cage nut hardware.
- Front door has a vented semi-transparent plexiglass panel.
- Rear door has a perforated metal panel.
- Doors are lockable, reversible to open right or left and interchangeable front to back.
- Cabinet and door frames are anodized aluminum extrusion, metallic.
- Top, door and side panels are powder-coat painted aluminum sheet, black.

Catalog #	Description
(B) M1053-732	MegaFrame cabinet, 19" W x 45 rack units x 36" D, fully assembled
12637-001	Equipment installation hardware, #12-24 cage nuts and screws, 25 pack, gold
12638-001	Equipment installation hardware, #10-32 cage nuts and screws, 25 pack, silver
12639-001	Equipment installation hardware, M6 cage nuts and screws, 25 pack, black

(Continued on Page 23)

Supplier Prefix: CHT

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CHATSWORTH
PRODUCTS, INC.



THE MEGAFRAME® CABINET SYSTEM (Continued)

Catalog #	Description
(B) 12465-707	Vertical cabling ring section
12470-007	Vertical power strip, 66" height, 120VAC, 20 outlets, 20A twist-lock plug
12470-009	Vertical power strip, 39" height, 120VAC, 10 outlets, 20A twist-lock plug
12475-001	Caster set, 3" diameter, full swivel, lockable, zinc
121518-519	Stabilization kit, 19"-wide cabinets, metallic

Cable Runway

TELCO-STYLE CABLE RUNWAY

Use cable runway to create cable pathways between equipment racks/cabinets and the entry/exit points for cable in Telco facilities. Support from the floor, wall, racks, cabinets or ceiling every 5 ft. of span.

- Welded construction, 9-ft. 8½-in. overall length
- Stringers are 1½-in. x ¾-in. tubular steel, .065-in. wall thickness
- Rungs are ½-in. x 1-in. tubular steel, .065-in. wall thickness
- 9-in. center-to-center rung spacing
- Available in various widths, individually packaged, one per carton
- Auxiliary framing bars/channels and runway wall/rack/ceiling supports are also available.

Catalog #	Description
(C) 11252-706	Telco-style cable runway, 6" wide, black
11252-712	Telco-style cable runway, 12" wide, black
11252-718	Telco-style cable runway, 18" wide, black
11301-001	Butt-splice kit, end-to-end connection, gold
11302-001	Junction-splice kit, T or L connection, gold
10642-001	End caps, one pair, black

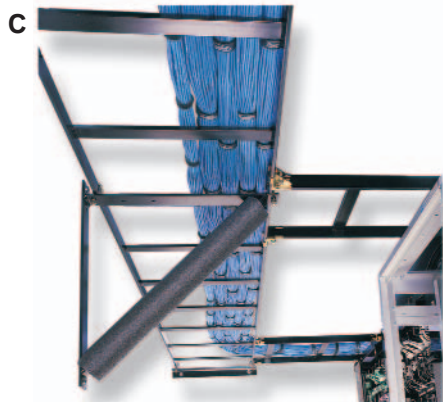
Racks

UNIVERSAL RACKS

The Universal Rack provides excellent airflow around equipment and minimizes the physical floor space required for installation with a single pair of fixed-position equipment-mounting channels. Well suited for use with shelves, the rack supports direct attachment of some small rack-optimized servers, but is best used to support cross-connection and switching. Also available in 8-ft.-high and 9-ft.-high versions to extend rack-mount spaces per square foot.

- Overall dimensions: 20¾-in. wide x 15-in. deep x 84-in. tall
- Provides 1,000 lbs. of equipment support (evenly distributed)
- Supports 19-in.-wide rack-mount panels and shelves
- Provides 45 vertical rack-mount spaces for 19-in.-wide rack-mount panels and shelves
- Mounting channels are 3-in. deep and threaded #12-24.
- Mounting channels are punched with the EIA-310-D universal hole pattern.
- Includes 50 each #12-24 equipment-mounting screws
- All parts are aluminum extrusion and have a grained, metallic finish.

Catalog #	Description
(D) 46353-503	Universal Rack, 19" W x 45 rack units x 3" D, metallic, ships unassembled, includes assembly
40604-001	Installation kit, concrete slab, zinc
40602-500	Rack baying kit, side-by-side attachment, metallic
40605-001	Equipment mounting screws, 50 pack, zinc
40074-500	Single-sided shelf, 15" deep, 50-lb. load, metallic
40108-519	Double-sided shelf, 21¾" deep, 100-lb. load, metallic
11054-519	Double-sided shelf, 26" deep, 150-lb. load, metallic



Supplier Prefix: CHT

The Service Provider

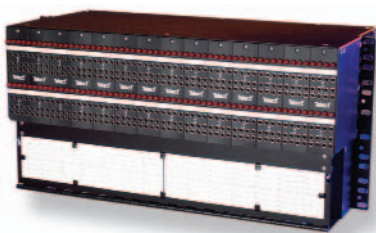
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Telect[®]

CONNECTING THE FUTURE[®]

A



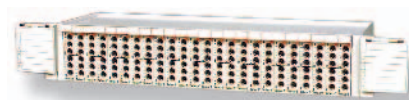
Cross-Connect Panels

DSX-1 PANELS

Here's a comprehensive list of solutions — with high-density, advanced cable management and configurations to meet the needs of the application. Numerous other configurations are available including: rear cross-connect (RXC) panels; 56-, 64- and 84-termination counts; 5¼- and 7-in. heights; black or white panels and more. Contact your local Graybar representative for details.

Catalog #	Description
(A) 010-1120-0201	19" x 8¾" 112-terminations dual 56 front cross-connect (FXC) DSX-1
010-4064-4010	19" 64-terminations 4000 series FXC DSX-1
010-4084-4001	23" x 5¼" 84-terminations 4000 series FXC DSX-1
010-4084-4011	23" x 7" 84-terminations 4000 series FXC DSX-1
010-0184-0001	19" x 7" 84-terminations dual 42 FXC DSX-1
E84	23" x 7" 84-terminations FXC DSX-1 (Excellent 84)
E84C7-A	Connectorized 23" x 7" 84-terminations FXC DSX-1 (Excellent 84)

B



DSX-3 SYSTEMS

Choose from a complete offering of high-density DSX-3 solutions — including Telect industry-first innovations and industry-compatible panels. Choose the Broadband Connectivity System (BCS) II for higher-density 32-termination 23-in. panels. Contact your local Graybar representative for details.

Catalog #	Description
(B) 010-0000-0401	23" BCS chassis
010-0000-1401	19" BCS chassis
010-8401-0410	6-port BCS DSX-3 module
010-8401-0401	4-port BCS DSX-3 module
010-0000-1850	23" WB series traditional RXC DSX-3 chassis
010-9101-0450	6-port WB series RXC DSX-3 module
010-0000-1801	23" ultra-thin series DSX-3 chassis
010-0000-0801	19" ultra-thin series DSX-3 chassis
010-9101-0403	6-port ultra-thin module, mini WECO
010-9111-0403	6-port ultra-thin module, standard WECO

C

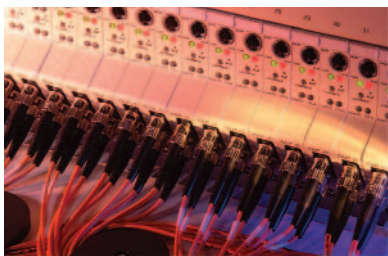


MIX 56" INTEGRATED M13 + DSX-1

Save rack space, install time and overall costs with the industry's only integrated M13 and DSX-1.

Catalog #	Description
(C) 710-1101-2801	Half-loaded chassis — 56-circuit DSX-1 with two M13 cards, -48V
710-1101-5601	Fully loaded chassis — 56-circuit DSX-1 with four M13 cards, -48V
710-1102-2801	Half-loaded chassis — 56-circuit DSX-1 with two M13 cards, +24V
710-1102-5601	Fully loaded chassis — 56-circuit DSX-1 with four M13 cards, +24V

D



Optical Transport System

VECTOR[™] OPTICAL TRANSPORT SYSTEM

Cost-effectively extend DS3 signals up to 50km over fiber optic infrastructure — in several space-saving configurations.

Catalog #	Description
(D) 710-3201-2002	Vector optical transport module, singlemode SC
710-1001-2002	Vector standalone module
010-0000-9900	Power supply for standalone module
010-0000-3201BCS	23" 32-position BCS II chassis, handles up to seven OTMs
010-0000-2401BCS	19" 24-position BCS II chassis, handles up to seven OTMs
010-0000-1471BCS	23" 10-position horizontal BCS II chassis

Supplier Prefix: TLE

The Service Provider

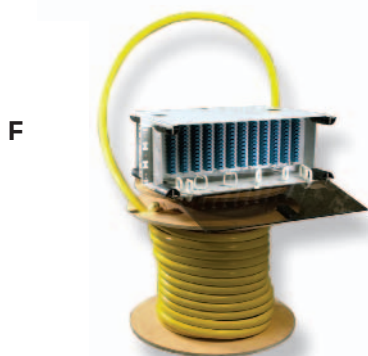
Solutions Guide

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Telect®

CONNECTING THE FUTURE®



Power Distribution Products

POWER DISTRIBUTION PANELS

Select from traditional GMT to innovative high-current solutions using TPA and TPC fuses or circuit breakers.

Catalog #	Description
(E) 009-0004-1045	Dual-feed 20/20-position GMT fuse panel
009-0002-1005	Single-feed 20-position GMT fuse panel
009-8004-0100	Dual-feed intermediate KTK/GMT fuse panel
009-6211-2100	Dual-feed high-current circuit breaker panel
009-8005-0404	Dual-feed 4 x 5 TPA/GMT fuse panel
009-8005-0420	Dual-feed 4 x 20 TPA/GMT fuse panel

Fiber Distribution Panels

FIBER OPTIC DISTRIBUTION SOLUTIONS

Create customized fiber optic distribution solutions with rack-mount and wall-mount patch and splice panels, distribution frames and accessories. Catalog numbers are based on configuration.

Catalog #
(F) For a list of catalog numbers, contact your local Graybar representative.

Cable Management

WAVETRAX™ CABLE MANAGEMENT SYSTEM

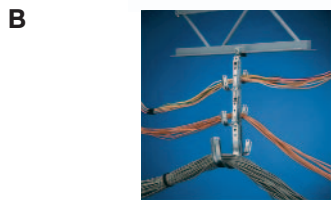
WaveTrax is the most comprehensive system available today — with simple, quick and intuitive installation. Catalog numbers are based on configuration.

Catalog #
(G) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: TLE



ERICO®



Cable Management

CATHBA AND AFAB ANGLE BRACKETS

New CADDY® CATHBA and AFAB angle brackets are an easy way to assemble CADDY CableCat™ J-hooks to beam or threaded rod. Create modular assemblies to organize and support high-performance cable. The heavy-duty CATHBA has reinforcing ribs and can be installed directly to the beam — eliminating rocking. The AFAB works with threaded rod and has specially designed tabs to expedite assembly and stabilize J-hooks.

- Provides proper support of Category 5, fiber optic and innerduct
- Cost-effective alternative to expensive cable tray
- Complies with UL, cUL, NEC and EIA/TIA requirements for structured cabling systems

Catalog #	Description
(A) AFAB-X*	Angled hanger bracket for threaded rod applications
(B) CATHBA-X*	Angled hanger bracket for beam for threaded rod applications
CATHBA	Angled hanger bracket for beam or ¼" threaded rod applications

*Threaded rod (in.): X= 3 (for 3/16), 4 (for ¼ — AFAB only), 6 (for 3/8), 8 (for ½ — CATHBA only)



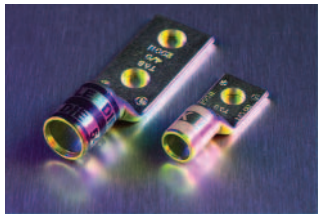
Supplier Prefix: ERI

The Service Provider
Solutions Guide

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Thomas & Betts

A



Connectors

COLOR-KEYED® CONNECTORS — UL AND CSA LISTED

Thomas & Betts offers a complete line of one- and two-hole, straight, 45° and 90° tongue, short- and long-barrel lugs from 8 AWG through to 750 Flex. Lead-plated lugs are also available. The connectors include silicon-bronze hardware kits with bolts, flat washers, split washers and hex nuts.

Catalog

(A) For a list of catalog numbers, contact your local Graybar representative.

COLOR-KEYED® COPPER H-TAPS — UL AND CSA LISTED

Thomas & Betts makes a complete line of copper H-taps for 600V applications. Aluminum H-taps are also available.

Catalog #	Color Code	Conductor Sizes Code / (Flex Cable)			
		Main	Branch 1	Branch 2	Branch 3
(B) CHT750350-1F	White	(750-500) (750)	(750-500) (350)	—	—
CHT750350-2	Yellow	750-500 (550-500)	750-500 (550-350)	—	—
CHT75010-3	Yellow	750-350 (550-500)	4/0-1/0 (250-1/0)	1 str. 2-6 AWG (1-8)	2-14 (2-14)
CHT50040-4	Brown	500-250 (350-4/0)	500-4/0 (350-4/0)	—	—
CHT750010-5	Brown	500-4/0 (350-4/0)	250-1/0 (4/0-1/0)	1 str. 2-6 AWG (1-8)	8-14 (8-14)
CHT2502-6	Purple	250-2 (4/0-2)	250-2 (4/0-2)	—	—
CHT25014-7	Purple	250-2 (4/0-2)	2-6 str./sol. (2-8)	8-14 (8-14)	—
CHT250214-8	Purple	250-2 (4/0-2)	8-14 (8-14)	8-14 (8-14)	—
CHT214-9	Brown	2-6 str./sol. (2-8)	2-6 str./sol. (2-8)	8-14 (8-14)	8-14 (8-14)
CHT814-10	Green	8-14 (8-14)	8-14 (8-14)	—	—

B



C



Heat-Shrink Tubing

SHRINK-KON® PVC CLEAR HEAT-SHRINK TUBING — THIN WALL

This flexible, polyvinyl-chloride, clear heat-shrink tubing has excellent flame-retardant properties, is UL 224 VW-1 and has a 2:1 shrink ratio.

Catalog #	Wire Size		Reel Size
	Code	Flex	
(C) CHS18	22-18 AWG	16-14 AWG	50'
CHS18B	22-18 AWG	16-14 AWG	250'
CHS14	16-10 AWG	12-10 AWG	50'
CHS14B	16-10 AWG	12-10 AWG	250'
CHS38	8, 6 AWG	8, 6 AWG	50'
CHS38B	8, 6 AWG	8, 6 AWG	250'
CHS12	4, 2 AWG	6, 4 AWG	50'
CHS12B	4, 2 AWG	6, 4 AWG	250'
CHS34	1, 1/0, 2/0, 3/0 AWG	2-1/0 AWG	50'
CHS34B	1, 1/0, 2/0, 3/0 AWG	2-1/0 AWG	250'
CHS100	4/0, 250, 300 kcmil	1/0-4/0 AWG	25'
CHS100B	4/0, 250, 300 kcmil	1/0-4/0 AWG	100'
CHS112	350, 400, 500, 600, 700 kcmil	250-500 kcmil	25'
CHS112B	350, 400, 500, 600, 700 kcmil	250-500 kcmil	100'
CHS200	750, 800, 900, 1,000 kcmil	500-750 kcmil	25'
CHS200B	750, 800, 900, 1,000 kcmil	500-750 kcmil	100'

D



E



Crimping Tools

BATTAC® COMPRESSION CRIMP TOOLS

Each battery-operated compression tool comes with a carrying case and strap, two standard 14.4V NiCad batteries and one 15-minute quick-charge AC charger. The TBM15BSCR can install all lugs, C-taps and H-taps used in telephony.

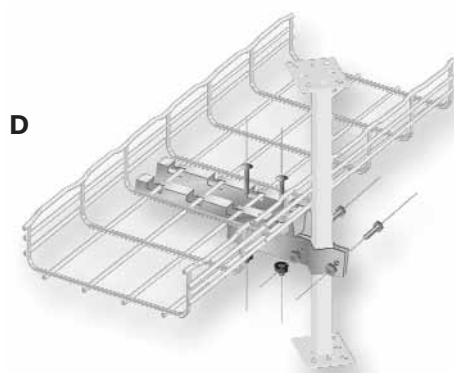
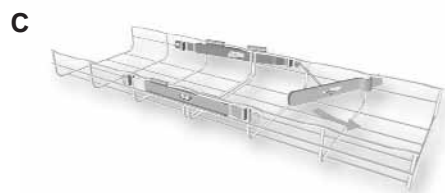
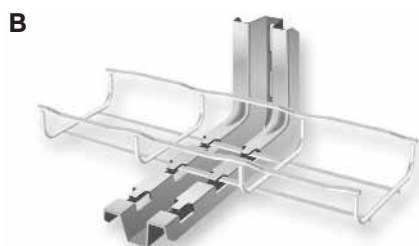
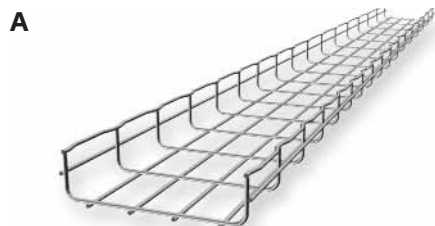
Catalog #	Lugs and Splices				Output (Tons)	Size and Weight — (weight includes battery)
	Copper (#8 thru)	Alum. (#8 thru)	H-Taps	C-Taps (thru)		
(D) TBM14BSCR	750 Flex	750 kcmil	250 kcmil	500 kcmil	14	19" L x 3½" W x 10½" H/20 lbs.
(E) TBM15BSCR	1,000 kcmil	1,000 kcmil	750 Flex	750 kcmil	15	21" L x 3½" W x 11" H/25.4 lbs.

Supplier Prefix: TNB

The Service Provider

Solutions Guide

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Cable Trays and Accessories

CABLE TRAYS

Cablofil is the global leader in innovative cable management, with over 70,000 miles of Cablofil cable tray installed worldwide. Cablofil cable tray is the revolutionary system constructed of precision-engineered, high-quality, welded steel wire. The patented Cablofil Fast Assembly System (FAS) supports and Safe-T-Edge enables the fastest installation of Cablofil cable tray.

- Available in 1-in., 2-in., 4-in. and 6-in. depths and in widths ranging from 2 in. to 24 in.
- Standard 10-ft. lengths
- Tray is available in electro-zinc (EZ), hot-dipped galvanized (GC), 316L stainless steel (IN) and durable EZ coat colors: black (BL), red (RD), yellow (YL) and grey (GY). Other powder-coat colors are available by special request.
- The patented Safe-T-Edge is easy on installers and cables.

Catalog #	Description
(A) CF 54/50EZ	2" D x 2" W x 10' L
CF 54/100EZ	2" D x 4" W x 10' L
CF 54/150EZ	2" D x 6" W x 10' L
CF 54/200EZ	2" D x 8" W x 10' L
CF 54/300EZ	2" D x 12" W x 10' L
CF 54/450EZ	2" D x 16" W x 10' L
CF 54/600EZ	2" D x 18" W x 10' L

STANDARD SUPPORT SYSTEMS

Use these support systems for walls, ceilings, floors and cabinets. The patented FAS supports hold Cablofil cable tray secure without nuts and bolts.

- For installation onto walls and attachment to underfloor pedestals
- The patented FAS-style attachment holds cable tray secure without nuts and bolts.

Catalog #	Description
(B) FAS L100	4" L
FAS L200	8" L
FAS L300	12" L

EDRN QUICK SPLICE

All splices are specially designed to join two sections of Cablofil cable tray, which saves up to half the installation time. They also feature a corrosion-resistant electro-zinc finish.

- Only two splices are needed to join Cablofil cable tray widths up to 18 in.
- Use two splices on sides and one or two on the bottom for 24-in. tray.
- A special assembly tool is included in every bag of splices.

Catalog #	Description	Quantity Per Package
(C) EDRNEZ	Quick splice	50

UFCN

- Attaches to round or square access floor posts
- For use with FAS Profile to support up to 12-in. Cablofil wire cable tray
- Each UFCN comes with four mounting bolts and nuts.
- Electro-zinc coated for superior corrosion resistance

Catalog #	Description
(D) UFCN	Under-floor support clamp

FAS ROLLER

- Use FAS Roller to eliminate the labor involved in pulling cable.
- Sold in sets of six and includes handy carrying case
- Can be attached with a clamp or Multifix™ poly-swivel base provided in case
- The unique four-roller design prevents cable snagging.

Catalog #	Description	Quantity Per Package
(E) FASROLLER	Cable roller	6

Supplier Prefix: CFZ



IP Telephony Solutions

3COM® NBX®

Imagine a telephone system that's so smart, it adds power to communications. A better quality of service, with on-screen voice mail, automated attendants, conferencing and more, is available as a standard package. Save 50 percent or more on international and long-distance voice and fax charges with the NBX networked telephony solution from 3Com.

- Easy-to-use voice mail
- Unified messaging
- Greater control, greater flexibility
- Reliable, flexible, multi-location and telecommuter solutions
- Built-in call processing, voice mail and computer telephony integration
- User-friendly interface

A



SUPERSTACK® 3 NBX NETWORKED TELEPHONY SOLUTIONS

The 3Com SuperStack 3 NBX networked telephony solution delivers a robust call-processing feature set and suite of applications right on the local area network. The system scales to support up to 1,500 lines and stations. It also enhances the industry-leading functionality initially offered on the NBX 100 communication system.

- Easy to install — Simply plug in the phone, open the Web browser and go through a few easy steps.
- Easy administration — Its browser-based management can help reduce the cost of moves, adds and changes.
- Scalable — The SuperStack 3 NBX system supports a combination of up to 1,500 lines and stations.

Catalog

(A) For a list of catalog numbers, contact your local Graybar representative.

B



3COM NBX 100 COMMUNICATION SYSTEM

The 3Com NBX 100 communication system is an integrated voice/data networking system that's affordable and convenient. It's feature rich and easy-to-use for growing businesses and enterprise branch offices.

- Easy to install — Simply plug in the phone, open the Web browser and go through a few easy steps.
- Easy administration — Its browser-based management can help reduce the cost of moves, adds and changes.
- Scalable — The NBX 100 system supports a combination of up to 200 lines and stations.

Catalog

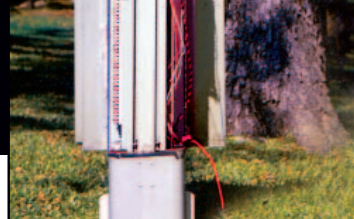
(B) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: TCM

The Service Provider

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A



Digital Loop Carriers

INTELEX® REMOTE DIGITAL TERMINALS (RDT)

The Intellex line of RDTs ranges from small card enclosures to large Channel Bank Assembly (CBA) enclosures offering unmatched efficiency and flexibility for field deployment. All cards and CBAs are interchangeable within enclosures. RDTs are available in the following sizes: 48 lines, 144 lines, 288 lines, 432 lines, 720 lines, 1,440 lines and 2,016 lines.

The Intellex RDT cabinets are sealed metal cabinets designed to withstand severe environmental conditions and to protect the equipment from harsh elements. The RDT cabinets are compliant with Bellcore GR-63 and GR-487 requirements and contain all of the components necessary to manage power, copper, coaxial and fiber cables.

RDT units can be powered with 110/220VAC or a combination of lines and express power, and provide battery back-up power as well. RDT housings can be deployed in a variety of configurations: point to point, "drop and insert", Star, Star from remote terminals, Ring or any combination of these network topologies. These versatile housings can be equipped with either MS2 or 710 connectors, and are equipped with protector blocks to accommodate standard 5-pin lighting-protector modules.

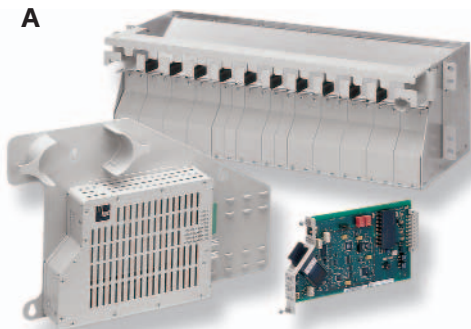
Catalog

(A) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: TST



A



Repeater Products

EXTEND™ OPTICAL/ELECTRICAL LINE EXTENDER

The Extend optical/electrical line extender transports DS3/STS-1 signals over extended distances and simplifies cabling in multifloor Central Offices and co-location applications, as well as campus and building local-exchange carrier environments. The line extender reduces congestion within the cable raceway and includes the added feature of modularity to offset deployment costs. It extends a DS3 or STS-1 signal up to 15km (9.375 miles). It is NEBS Level 3 compliant, has a modular design in 24-position rack-mounted chassis or single wall-mounted chassis and features integrated cable management. The integrated passive heat baffle requires no active fan units.

Catalog

(A) RP3-2X-CBL-KIT
RP3-2X0000
RP3-2XW001
RP3-2XWP01
RP3-E10000

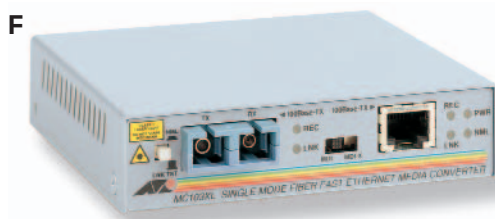
Description

Cable ring kit with labels
Unloaded chassis, rack mount, 24 position, heat baffle
Unloaded chassis, wall mount, single position
Power supply, single AC/DC
Module, SC connectors, loss of signal LEDs

Supplier Prefix: ADC

The Service Provider
Solutions Guide

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Ethernet Switches

RAPIER LAYER 3 SWITCHES

Allied Telesyn's Rapier family of Layer 3 switches delivers an unprecedented level of integration and switching performance at affordable prices. With wirespeed Layer 2 switching and wirespeed Layer 3 IP routing on all ports, these switches are designed for high-performance desktop connectivity, workgroup and server farm aggregation or backbone applications. The Rapier 24i Fast Ethernet switch offers 24 10/100Base-TX ports for micro-segmentation. It includes an advanced feature set and offers Stateful Inspection Firewall, last-mile WAN connectivity, encryption, tunneling protocols, rate limiting and QoS functionality. The Rapier G6 is equipped with six form-factor Gigabit ports and singlemode, multimode or copper Gigabit interfaces. Additionally, all Rapier switches include two optional uplink slots, which can be configured with either a 1000Base-SX, 1000Base-LX or 1000Base-T interface module for flexibility.

Catalog #	Description
(A) AT-RP24I-10	24-port 10/100Base-TX Fast Ethernet Layer 3 switch with two expansion bays and a WAN access bay
(B) AT-RPG6-10	6-port 1000Base-T managed Gigabit Ethernet Layer 3 switch with two bays for optional Gigabit uplinks

LAYER 2 MANAGED SWITCHES

Allied Telesyn offers an extensive selection of Layer 2 managed switches for terminating tiered Ethernet services. The high-performance 24-port AT-8224XL, which also comes in a NEBS-certified -48VDC version, is an example. Another option is one of the 8000-series Fast Ethernet switches that features a compact, single rack unit form factor. The AT-8024, AT-8024GB and AT-8026FC include 24 10/100Base-TX ports and Enhanced Stacking™. If management is not a requirement, Allied Telesyn also offers several unmanaged switches.

Catalog #	Description
(C) AT-8224XL-10	24-port 10/100Base-TX managed Fast Ethernet switch with two expansion bays for fiber or Gigabit uplinks
AT-8024-10	24-port 10/100Base-TX managed stackable Fast Ethernet switch
AT-8026FC-10	24-port 10/100Base-TX managed stackable Fast Ethernet switch with two fixed 100Base-FX (SC) ports
AT-8024GB-10	24-port 10/100Base-TX managed stackable Fast Ethernet switch with two GBIC bays

DSL Multiplexers

IP-BASED XDSL

Allied Telesyn offers a range of IP-based xDSL products, which includes standards-based ADSL, IDSL and SDSL. Not only does Allied Telesyn's xDSL typically travel at faster speeds and longer distances than any other DSL solution on the market today, its seamless set-up, simplicity and low-cost equates to a faster ROI for service providers.

Catalog #	Description
(D) AT-NT140	IP DSL access multiplexer chassis, supports one uplink module and four access modules
(E) AT-NT120	IP DSL access multiplexer chassis, supports two uplink modules and 12 access modules

Media Converters

10/100/1,000MBPS MEDIA CONVERTERS

Allied Telesyn supports various flavors of speed/distance/media-type conversion, from micro transceivers to 10/100/1,000Mbps media converters. T-1/DS3 network extension is yet another solution which eliminates the need for costly T-1/DS3 interfaces and routers.

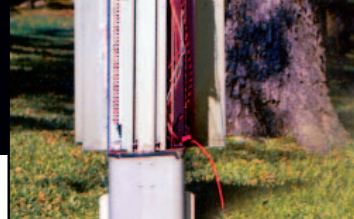
Catalog #	Description
(F) AT-MC103XL-10	100Base-TX (RJ-45) to 100Base-FX singlemode fiber (SC) media converter

Supplier Prefix: ALS

The Service Provider

Solutions Guide

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DSL Electronics

HIGH-SPEED VOICE AND DATA LINK (HVDL) 3.1

HVDL 3.1 enables a single copper pair to deliver three voice channels and one high-speed Ethernet data channel to small business and residential subscribers on loops of up to 56,000 ft. Utilizing low-noise, low-power TCPAM (G.shdsl) line coding, the system multiplexes three 64Kbps clear channel voice lines and one 1Mbps symmetrical data line for transport, then demultiplexes at the subscriber site via a line-powered remote terminal. HVDL is the ideal way to bring DSL to remote and low-density areas with minimal start-up costs and pay-as-you-grow scalability.

Catalog #	Description
(A) 92-HVDL315-A	HVDL 19" line unit shelf
92-HVDL311-A	HVDL 23" line unit shelf
(B) 93-HVDL47731-A	HVDL remote terminal with fail-to-POTS
91-HVDL37031-B	HVDL Central Office Terminal (COT) line card

Please contact your local Graybar representative for repeater, access multiplexer and other HVDL options.

Channel Banks

360-80 INTELLIGENT CHANNEL BANK (ICB)

The 360-80 ICB offers the industry's most supported interfaces in the smallest profile (one rack unit) intelligent channel bank. Three (two full-size, one half-size) channel module slots accept temperature-hardened FXS/DPO, FXO/DPT, E&M voice frequency modules and OCU, DSU, ISDN and 56/64xN data modules for indoor/outdoor applications. A T-1 controller module with advanced remote monitoring software makes installation, operation and maintenance easier than ever. The 360-80 ICB supports "drop and insert" and "drop and reinsert".

Catalog #	Description
(C) 93-0360-80-B	360-80 ICB universal enclosure (one rack unit)
91-3603-80-B	360-80 T-1 controller module

Please contact your local Graybar representative for voice and data channel modules and other accessories.

Supplier Prefix: COI

Local Loop & Transmission



DSL Electronics

GOLONG™

GoLong doubles the serving distance of ADSL by inserting an active element in the loop plant. GoLong is deployed on a single-circuit basis with an office repeater bay (ALE-C) card as well as an ADSL loop extender (ALE-R) card.

Catalog #
(A) For a list of catalog numbers, contact your local Graybar representative.

Timing and Synchronization

TIMESOURCE® 2700, 3000 AND 3500

The TimeSource 2700 is a CDMA Primary Reference Source (PRS) providing two precise synchronization outputs. The system antenna mounts inside the building, dramatically lowering installation and maintenance costs. Stratum 1 holdover is provided for up to 21 days, if CDMA signals are disrupted.

The TimeSource 3000 is a GPS PRS providing up to 10 precise synchronization outputs. The system uses a standard roof-mounted antenna. It provides undisturbed Stratum 1 synchronization when locked to four GPS satellites, with continued Stratum 1 performance for up to 72 hours upon loss of GPS.

The TimeSource 3500 is a GPS PRS that uses an antenna mounted inside a window. The unit needs a single satellite in view for as little as 10 hours per day. Up to 10 precise synchronization outputs are provided with Stratum 1 holdover for up to 21 days upon loss of GPS.

Catalog #
(B) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: TSL

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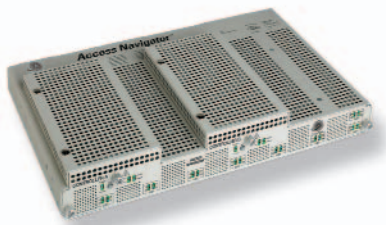
**Aggregation Devices****ACCESS NAVIGATOR®**

The Access Navigator is a proven, reliable and cost-effective, carrier-quality solution. The combination of the Carrier Access Adit™ 600 and Access Navigator offers a revolutionary solution for Centrex, ISDN, voice and data delivery. The Access Navigator GR-303 + Data Host provides a remote switch concentrator and management host, eliminating the need for separate BRITE shelves. It supports a 4:1 D-channel mode ISDN voice concentration and cost-efficient T-1 grooming, permitting ISDN-BRI and other non-ISDN voice and data services to be transported over a total of 32 T-1s per Access Navigator shelf.

- The Access Navigator eliminates large copper cables, extra CO bays and additional ISDN ports.
- It aggregates ISDN data and voice services from multiple customers.
- Get significant backhaul cost savings through voice concentration and data grooming.
- It scales from 8 line to 2,000 line applications.
- It also enables more-efficient traffic consolidation and bandwidth management.

Catalog #

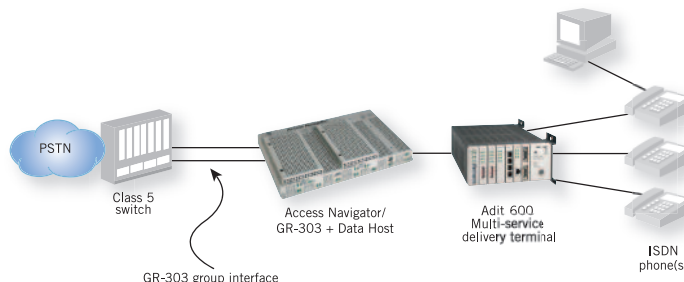
(A) For a list of catalog numbers, contact your local Graybar representative.

A**B****ADIT 600**

The Adit 600 achieves an ISDN service density of up to 40 ISDN-BRI or 10 ISDN-BRI per T-1 link. Besides ISDN, the modular Adit 600 supports the delivery of a variety of services, including analog voice (POTS), 10/100Base-T Ethernet with IP routing, OCU-DP, V.35 data, or drop-and-insert T-1 service.

Catalog #

(B) For a list of catalog numbers, contact your local Graybar representative.

**C****Integrated Access Devices****AXXIUS™ 800 3/1/0 DCS**

The Axxius 800 provides expansive network and service capacity within a remarkably small unit. The advanced bandwidth management capability of the Axxius 800 includes full 3/1/0 cross-connect functionality and scaling from DS0 granularity up to dual DS3 — ensuring the most efficient use of network resources.

With eight slots for a wide variety of hardened service and controller cards, the Axxius 800 provides connections for a broad combination of voice and data services. It can deploy up to 36 T-1 tributary circuits or any mix of voice and high-speed data services, satisfying bandwidth requirements in just two rack units.

This unmatched flexibility results in more services and revenues derived from a given set of network assets. The ideal solution for fulfilling the demands of wireless and wireline provider networks, the Axxius 800 readily meets growing service and bandwidth requirements.

- The Axxius has unprecedented scalable bandwidth and capacity.
- Redundant power supplies and controller cards
- Eight, hot interchangeable card slots
- It supports Ring, Star and Cascade network topologies.

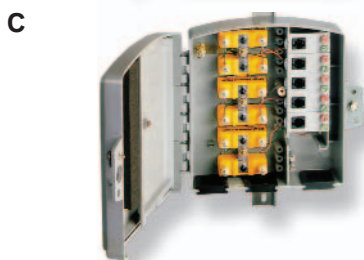
Catalog #

(C) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: CSR



Reliable Electronic Solutions



Supplier Prefix: BOU

DSL Splitters/ Line Conditioner

3610A ADSL AND 3630A VDSL POTS SPLITTERS

Bourns® new ADSL POTS splitter (3610A) and the VDSL POTS splitter (3630A) accept incoming DSL service, filter off the voice (POTS) channel and provide a connection for DSL modems. The 3610A supports full-rate and G.Lite ADSL services and is T1.413 compliant. The 3630A supports full-rate VDSL service and is T1E1.4 compliant. In the event of power loss, the passive filter design allows for lifeline POTS service. Utilizing a footprint similar to conventional Bourns station protectors, the 3610A and 3630A occupy only a single space in the majority of Bourns' weather-resistant NID enclosures. Fitted with screw terminals and flying leads, either unit can be installed in minutes.

Catalog #	Description
(A) 3610A	ADSL POTS splitter, compatible with most NIDs
3611	ADSL POTS splitter, compatible with CCS 7600 series
(B) 3630A	VDSL POTS splitter, compatible with most NIDs
3631	VDSL POTS splitter, compatible with CCS 7600 series
3612	IPA POTS splitter, compatible with CCS 2006 series

Network Interface Device (NID)

7090 SERIES

Bourns' NIDs provide a secure and weather-resistant enclosure for single- or multi-line, residential or commercial installations. The 7090 is designed for termination and station protection of up to six twisted-pair or up to three DSL POTS splitters or combinations of both. It is manufactured from high-impact-resistant, ultraviolet-desensitized, flame-retardant, UL Listed plastic and offers optional two or four post sealed jack options.

Catalog #	Description
(C) 7090-02-DO	6-pair NID
7005-01-COP	2-pair NID
7032-25-DVO	25-pair NID

Local Loop & Transmission

Thomas & Betts

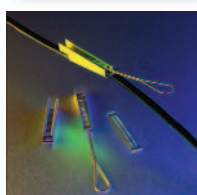
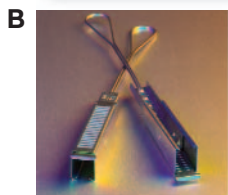
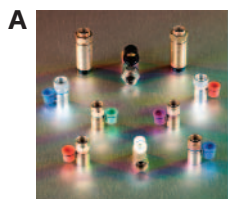
Connectors

LRC® SNAP-N-SEAL® DROP CONNECTORS

The Snap-N-Seal connectors are environmentally sealed to protect drops from harsh environments. They're manufactured from high-quality 360 brass, cadmium plated with iridescent chromate coating for maximum corrosion resistance, color-coded by cable size and also available for quad-shield and head-end cables.

Catalog #	Description	Post I.D.	Sleeve I.D.	Color	Tools*
(A) SNS59	RG59 cable	.154	.253	Orange	1 or 2 + 3
SNS6	RG6 cable	.191	.290	Blue	1 or 2 + 3

* Tools: 1= IT1000, 2= CST596711, 3= SNSUTL



DIAMOND®/SACHS® DROP-WIRE CLAMP

These drop-wire clamps are used to support both ends of telephone drops at the strand and the building. 1-, 2- and 6-pair versions are available.

Catalog #	Description	Shim Type	Material
(B) 23-44444	1-2 pair	Serrated	Aluminum
23-88881	1-2 pair	Serrated	Stainless steel
23-82351	6 pair	Dimpled	Aluminum

Cable Management

TY-RAP® CABLE TIES

Ty-Rap cable ties feature a nonmagnetic, stainless-steel locking mechanism designed to maintain the right tension for a wide variety of applications.

Catalog #	Description	Width/Length	Max. Wire Bundle Dia.	Tensile Strength	Material
(C) TY525M		.184" / 7.31"	1 3/4"	50	Nylon 6/6
TY525MX		.184" / 7.31"	1 3/4"	50	Nylon 6/6, weather resistant, black
TY526M		.140" / 11.1"	3"	30	Nylon 6/6
TY528MX		.184" / 14.2"	4"	50	Nylon 6/6, weather resistant, black



Supplier Prefix: TNB

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Closures and Terminals

3M offers a wide range of copper or fiber, closures and terminals for aerial, underground, direct buried and vault applications. There is also a wide variety of network accessories sold with the closures and terminals.

- Aerial: Used in above ground outside plant applications, usually associated with a strand or pole mount.
- Underground: Used in below ground outside plant applications, associated with a ducted system, i.e. manhole, handhole, etc.
- Direct Buried: Used in below ground applications, with a non-ducted system, i.e. buried plant or pedestal plant.
- Vault: Used in applications, associated with products that are inside a Central Office or building.

SLiC AERIAL CLOSURES

The 3M SLiC closure is a single-piece aerial closure easily installed in construction or maintenance situations. The one-piece construction permits complete splice access after placement, without removal of the closure or bonding from the cables. The closures are free breathing and suitable for straight, butt and branch splices of non-pressurized communication cables.

A



Catalog #	Description
(A)	SLiC aerial closure kit with floating bond
	SLiC aerial closure kit with spiral-end seal
2" x 19"-SES	Spiral-end seal, 1kg (2.3 lbs.)
2" x 29"-SES	Spiral-end seal, 1.7kg (3.7 lbs.)
3" x 19"-SES	Spiral-end seal, 2kg (4.4 lbs.)
3" x 33"-SES	Spiral-end seal, 2.4kg (5.3 lbs.)
5" x 33"-SES	Spiral-end seal, 3.8kg (8.3 lbs.)
7" x 33"-SES	Spiral-end seal, 5kg (11.1 lbs.)
9" x 36"-SES	Spiral-end seal, 7.5kg (16.5 lbs.)
	SLiC aerial closure kit with rubber-end seal
2" x 19"	2 double port, 1.1kg (2.4 lbs.)
2" x 29"	2 double port, 1.7kg (3.7 lbs.)
3" x 19"-SES	Spiral-end seal, 2.1kg (4.6 lbs.)
3" x 33"	2 triple port, 2.4kg (5.6 lbs.)
5" x 33"	2 triple port, 3.6kg (8 lbs.)
7" x 33"	2 triple port, 4.8kg (10.6 lbs.)
9" x 36"	2 triple port, 7.3kg (16 lbs.)
	SLiC aerial closures with rigid-bond/sheath retention
	Aerial closure kit with spiral-end seal
2" x 19"-SR/SES	Spiral-end seal, 1.1kg (2.5 lbs.)
2" x 29"-SR/SES	Spiral-end seal, 1.7kg (3.7 lbs.)
3" x 19"-SES	Spiral-end seal, 2.2kg (4.8 lbs.)
3" x 33"-SR/SES	Spiral-end seal, 2.6kg (5.8 lbs.)
5" x 33"-SR/SES	Spiral-end seal, 3.9kg (8.6 lbs.)
7" x 33"-SR/SES	Spiral-end seal, 5.1kg (11.2 lbs.)
9" x 36"-SR/SES	Spiral-end seal, 7.4kg (16.3 lbs.)
	SLiC aerial closures with bond assembly attached (4462-SN)
	Aerial closure kit with spiral-end seal
2" x 19"-BA/SES	Spiral-end seal, 4.3kg (9.4 lbs.)
2" x 29"-BA/SES	Spiral-end seal, 6.5kg (14.4 lbs.)
3" x 19"-SES	Spiral-end seal, 7.2kg (15.7 lbs.)
3" x 33"-BA/SES	Spiral-end seal, 9.1kg (20 lbs.)
5" x 33"-BA/SES	Spiral-end seal, 3.9kg (8.6 lbs.)
7" x 33"-BA/SES	Spiral-end seal, 5kg (11 lbs.)
9" x 36"-BA/SES	Spiral-end seal, 7.6kg (16.8 lbs.)
	Aerial closure kit with rubber-end seal
2" x 19" BA	2 double port, 4.3kg (9.5 lbs.)
2" x 29" BA	2 double port, 6.6kg (14.5 lbs.)
3" x 19"-SES	Spiral-end seal, 7.5kg (16.3 lbs.)
3" x 33" BA	2 double port, 9.1kg (20 lbs.)
5" x 33" BA	2 double port, 3.8kg (8.3 lbs.)
7" x 33" BA	2 double port, 4.8kg (10.5 lbs.)
9" x 36" BA	2 double port, 7.4kg (16.4 lbs.)
	SLiC aerial closures with bond assembly attached (4460-S)
	Aerial closure kit with spiral-end seal
2" x 19" 4460S/SES	Spiral-end seal, 1.1kg (2.4 lbs.)
2" x 29" 4460S/SES	Spiral-end seal, 1.7kg (3.8 lbs.)
3" x 19"-SES	Spiral-end seal, 2kg (4.35 lbs.)
3" x 33" 4460S/SES	Spiral-end seal, 2.4kg (5.2 lbs.)
5" x 33" 4460S/SES	Spiral-end seal, 3.7kg (8.1 lbs.)
7" x 33" 4460S/SES	Spiral-end seal, 5kg (11.1 lbs.)
9" x 36" 4460S/SES	Spiral-end seal, 7.2kg (15.9 lbs.)

Supplier Prefix: MMM

(Continued on Page 35)

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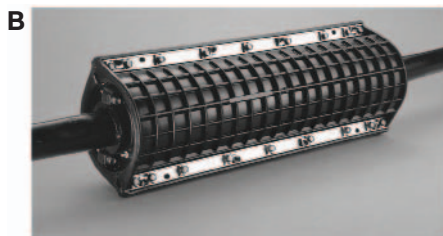


SLIC AERIAL CLOSURES (Continued)

Catalog #	Description
(A)	Aerial closure kit with rubber-end seal
2" x 19" 4460S	2 double port, 1.1kg (2.4 lbs.)
2" x 29" 4460S	2 double port, 1.8kg (3.9 lbs.)
3" x 19"-SES	Spiral-end seal, 2.1kg (4.57 lbs.)
3" x 33" 4460S	Double port/triple port, 2.4kg (5.2 lbs.)
5" x 33" 4460S	Double port/triple port, 3.5kg (7.8 lbs.)
7" x 33" 4460S	Double port/triple port, 4.8kg (10.6 lbs.)
9" x 36" 4460S	Double port/triple port, 7kg (15.4 lbs.)

2-TYPE PRESSURIZED CLOSURE KITS

The 3M 2-type closure is a complete pressure-tight re-enterable closure system for enclosing spliced connections of communication cables in a wide variety of applications. 2-type closures are available in many different closure lengths and diameters. Each complete 2-type kit contains all the components needed to install cover and end plates.



Catalog #	Description
(B)	
2A2A-2-510	1 cable in, 1 cable out
2A2A-3-510	1 cable in, 2 cables out
2B2A-2-510	1 cable in, 1 cable out
2B2A-3-510	1 cable in, 2 cables out
2B2A-4-510	1 cable in, 3 cables out
2B2A-5-510	2 cables in, 3 cables out
2C2A-2-510	1 cable in, 1 cable out
2C2A-3-510	1 cable in, 2 cables out
2C2A-4-510	1 cable in, 3 cables out
2C2A-5-510	2 cables in, 3 cables out
2D2A-2-510	1 cable in, 1 cable out
2D2A-3-510	1 cable in, 2 cables out
2D2A-4-510	1 cable in, 3 cables out
2D2A-5-510	2 cables in, 3 cables out



2178-L/S FIBER OPTIC SPLICE CASES

The 3M 2178-L/S fiber optic splice case is ideal for outside plant, underground, aerial, pedestal and direct buried applications. The cases are made of a tough chemical-resistant material with a gasket seal. The 2178-L/S requires no special tools or complicated training materials and stands up to even the most severe conditions of moisture, vibration and extreme temperatures.

2178-L/S-FR FLAME-RETARDANT SPLICE CASES

Designed for use in vault and building applications, the 3M 2178-L/S-FR splice cases are molded with a flame-retardant material that allows these closures to pass Telcordia Technologies (Bellcore), UL and various global specifications that require a flame-retardant rating. The new material increases the resistance of the closure to the effects of sprays and release agents used for easier re-entry.

Catalog #	Description
(C)	
2178-S	Small fiber optic splice case with materials for installation of 3 cables
2178-LS	Large fiber optic splice case with materials for initial installation of 4 cables
2178-LL	Extra-large fiber optic splice with materials for initial installation of 4 cables
2178-S/FR	Small fiber optic splice case with materials for installation of 3 cables
2178-LS/FR	Large fiber optic splice case with materials for initial installation of 4 cables
2178-LL/FR	Extra-large fiber optic splice case with materials for initial installation of 4 cables

Supplier Prefix: MMM

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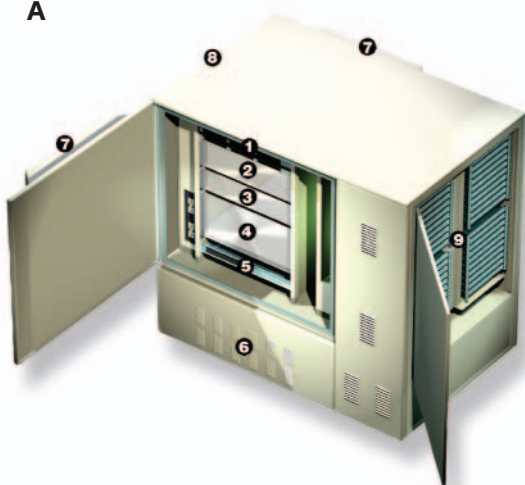
Cabinets

3M™ 4300 CROSS-CONNECT CABINETS

The 4300 cross-connect cabinets are compact in size for rural and low-population areas. The housings can be stake or pad mounted. Stake mounting allows an open bottom to permit a wide number of cables to enter the cabinet. The 4300 cabinets meet Telcordia GR-000487.

Catalog #	Description	Catalog #	Description
4306	Empty splice housing	4312-SSHCTO	1200-1200/CBM-A
4306-SSHCTO	600-000/A cabinet	4312-SSHCTO	1200-1200/T-A
4306-SSHCTO	600-600/CBM-A	4318	Empty splice housing
4306-SSHCTO	600-600/T-A	4318-SSHCTO	1800-0000/A cabinet
4312	Empty splice housing	4318-SSHCTO	1800-1800/CBM-A
4312-SSHCTO	1200-0000/A cabinet	4318-SSHCTO	1800-1800/T-A

A



- 1 Fiber Distribution Unit (FDU)*
- 2 Power Supply*
- 3 System Monitor and Alarm Panel (SMAP)*
- 4 MUX*
- 5 POTS Splitter*
- 6 Battery Compartment
- 7 Thermal Management System
- 8 Circuit Box Compartment
- 9 Cross Connect

* Components 1-5 can be interchanged within rack

3M E-CABINETS

The 3M E-Cabinet family now offers an electronic option for outside plant applications.

The customer-configurable 8800 cabinet family offers the following combinations:

- Multi-function battery storage/cable feed base
- Electronics compartment with an internal steel frame (in two standard heights)
- Aluminum outer skin enabling field expansion
- Integrated door/heat exchange module for thermal management
- Optional side module, which can be attached to the electronics cabinet and house a cable splice and x-connect frame

Catalog #	Description
(A)	Cabinet
8800K-3D	Cabinet
8800K-XCH	X-connect housing for 8800K
8814	Base isolation gasket
8856K-MR	Mount gang
	Doors
8801K-D/LH	Left-hand door
8801K-D/RH	Right-hand door
8801K-HED/LH	Heat exchanger left-hand door
8801K-HED/RH	Heat exchanger right-hand door
8801K-ACD/L	Air conditioner left-hand door
8801K-ACD/RH	Air conditioner right-hand door
8801K-ACPCD	AC power chamber door
8801K-ACPCD/V	AC power chamber door with view port
	AC power panel (includes mounting tray, wiring and outlets)
88120-60	120V 60A feed; 8-position load center
88240-60	240V 60A feed; 12-position load center
88240-60H	240V 60A feed; 12-position load center with hubble connector
88240-60M	240V 60A feed; 12-position load center with meter socket
88240-60HM	240V 60A feed; 12-position load center with hubble and meter socket
8817	Panel-mount outlet strip
	Additional AC circuit breakers
88220	20A circuit breaker
88215	15A circuit breaker
	Cable entry panels
8898	Flex port kit #1
	Equipment racks
8823FR	23" fixed rack kit, #12-24 holes pattern: ½", 1¼", ½", 1¼"...
8823SR	23" swing rack kit, #12-24 tapped pattern: ½", 1¼", ½", 1¼"...
8819FR	19" rack adapter, fixed rack
8819SR	19" rack adapter, swing rack
	DC power supply
8848	48V 300W power supply brick
8823PSR	23" power supply rack
8810	10A rectifier module
8820	20A rectifier module
8830	30A rectifier module
8840	40A rectifier module
8807	Deluxe digital monitoring system

Supplier Prefix: MMM

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Pedestals

UPCBD 3, 4, 5 DISTRIBUTION CLOSURES

UPCBD series are round-cornered, square-designed, telephone distribution closures that are accepted for use by the RUS. The UPCBD3, UPCBD4 and UPCBD5 include a dielectric shield, cable ties and shield isolation bonding/grounding bracket assembly. The UPCBD is also available with a divider plate (UPCBD3H, UPCBD4H, UPCBD5H).

Catalog #	Description
(A) UPCBD3	6" gray-green pedestal
UPCBD3H	6" gray-green pedestal with divider plate (DPBD3H)
UPCBD3A	6" gray-green pedestal with pole-mounting hardware (PKGPM)
UPCBD3OB34	6" gray-green pedestal with OB34 bracket
UPCBD3OR	6" orange pedestal
UPCBD4	8" gray-green pedestal
UPCBD4H	8" gray-green pedestal with divider plate (DPBD4H)
UPCBD4A	8" gray-green pedestal with pole-mounting hardware (PKGPM)
UPCBD4OB34	8" gray-green pedestal with OB34 bracket
UPCBD4OR	8" orange pedestal
UPCBD5	10" gray-green pedestal with divider plate (DPBD5H)
UPCBD5H	10" pedestal with divider plate (DPBD5H)
UPCBD5A	10" gray-green pedestal with pole-mounting hardware (PKGPM)
UPCBD5OB5	10" gray-green pedestal with OB5 bracket
UPCBD5OR	10" orange pedestal

PROFORM® SERIES NON-METALLIC PEDESTALS

The ProFORM series of non-metallic pedestals is the newest line of pedestals from Marconi, designed to GR-13-CORE specifications.

Optimal working space is ensured for splicing, bonding and grounding, terminal block attachment, service wire entry, and wire grooming and management. The ProFORM pedestal provides simplified installation through its three-piece design, "slide and secure" mounting-plate assembly, and optional split-base design.

The unique shape provides superior splicing capacity to better secure open wire bundles and wirework enclosures. Its shape also provides improved aesthetics over competitive plastic pedestals for a "less industrial" appearance. All available sizes are not shown.

Catalog #	Description
(B) PRO800H	6" 800-splice connection, split base with integral spade
PRO1200	8" 1200-splice connections, integral spade
PRO1200H	8" 1200-splice connections, split base with integral spade
PRO1800	10" 1800-splice connections, integral spade
PRO1800H	10" 1800-splice connections, split base with integral spade
PRO3000	12" 3000-splice connections, integral spade
PRO3000H	12" 3000-splice connections, split base with integral spade

Supplier Prefix: RUP



Supplier Prefix: ALT

DSL Splitters/Line Conditioner

DSL SPLITTER OUTDOOR DEVICE

- ANSI T-1 in-line filter draft and FCC part 68 compatible
- UL Listed for US and Canada
- Has stop band better than 30dB and wiring terminals for network, voice and data
- Outdoor housing is environmentally hardened for wall or conduit mounting.

Technical specifications

Filter topology	.2 pole low pass
DC loop current	.0 to 100mA
DC loop voltage (tip and ring)	.0 to 60VDC
Ring signal	.103 VRMS on the VDC, 20 to 30Hz
DC resistance	<.10 ohms (POTS)
Loading capacity	.47nF
Attenuation distortion relative	.1.0, 0.3, 3.4KHz is +/- 1dB maximum
Operating temperature	-40 to 65 C degrees (-40 to 149 F degrees)
Relative humidity	.0 to 95 percent non-condensing
Dimension (H x W x D)	.4% in. x 3 3/4 in. x 2 3/4 in.
Weight	.0.4 lbs.

Catalog #	Description
(A) AT626DSL	DSL splitter outdoor device



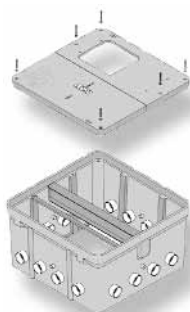
A



B



C



D



Supplier Prefix: QUA

Enclosures

STRONGWELL/QUAZITE® PG STYLE BOX

- Extremely strong, lightweight, easy to install, nonconductive, corrosion/impact/UV resistant, stable under freeze/thaw conditions
- UL Listing, which is available for enclosures sized through 30" x 48", ensures the end user that the product will perform as expected in the intended application.
- Available in the following sizes, with 12" to 48" depths (sizes in bold are UL Listed): **11" x 18"**, **13" x 24"**, **17" x 30"**, 24" x 24", **24" x 36"**, **30" x 48"**, 30" x 60", 36" x 36", 36" x 60", 36" x 72", 48" x 48", 48" x 72", 48" x 96"
- Design load at 22,568 lbs. and test load at 33,852 lbs.
- CA, HA and HH covers are available for all sizes (HH cover not available for 24" x 24"). Standard and custom cover logos are available.
- CA covers have design load at 8,000 lbs. and test load at 12,000 lbs.; HA covers have design load at 15,000 lbs. and test load at 22,568 lbs.; HH covers have design load at 22,568 lbs. and test load at 33,852 lbs.

Catalog #	Description
(A) Box: PG3048BA18 Cover: PG3048HA0017 PG1730BA12 PG3048HA0012	Precast polymer concrete enclosures are for use as a splice box, pull box, equipment enclosure or any application requiring easy access to an underground service. They are stackable for increased depth, with straight sides for easy adjustment of box to grade.

STRONGWELL/QUAZITE PR STYLE BOX

- Extremely strong, lightweight, easy to install, nonconductive, corrosion/impact/UV resistant, stable under freeze/thaw conditions
- Available in the following sizes: 27" diameter x 36" deep, with design load at 15,000 lbs. and test load at 22,568 lbs.; 39" diameter x 18", 24", 36" and 48" depths, with design load at 22,568 lbs. and test load at 33,852 lbs.
- Standard (CA) and heavy-duty (HA) covers are available for all sizes. Standard and custom cover logos are available.
- CA covers have design load at 8,000 lbs. and test load at 12,000 lbs.; HA covers have design load at 15,000 lbs. and test load at 22,568 lbs.

Catalog #	Description
(B) Box: PR2732BA36 Cover: PR2700CA17 LR3944BA24 PR3900HA12	Round precast polymer concrete enclosures, with cover that cannot fall into the box

STRONGWELL/QUAZITE CELL SITE BOX

- Extremely strong, lightweight, easy to install, nonconductive, corrosion/impact/UV resistant, stable under freeze/thaw conditions
- Removable split cover allows easy access to cable lines.
- Sixteen 4" terminals and open area inside box provide room to install multiple lines.
- Equipment changes and upgrades are easy and cost effective.
- Size: 48" x 48" x 36"

Catalog #	Description
(C) PG4848Z51109 and PG4848Z51509	Precast polymer concrete assembly, with 16 terminators and replaceable cover, intended for use at cell sites

Equipment Pads

STRONGWELL/QUAZITE ELECTRICAL/TELEPHONE EQUIPMENT PADS

- Extremely strong, lightweight, easy to install, nonconductive, corrosion/impact/UV resistant, stable under freeze/thaw conditions
- Pads will support weight of equipment mounted to them without bending or cracking.
- Electrical pads and box pads work with most transformers and switchgear manufactured today.
- Telephone equipment pads accommodate most telephone cabinets manufactured.
- Throat sizes and insert locations can be designed to meet your requirements.
- Optional SPLIT-PAD® design makes retrofit installations easy and eliminates the need to disconnect service during installation.
- Sizes range from 22" x 36" to 117" x 75"

Catalog #	Description
(D) PH42421225S3T PL72601032A4T PK72640935B4T PB2436BA18	Precast polymer concrete pads reinforced with a heavy-weave fiberglass, for use as a replacement for concrete and fiberglass pads

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A



Enclosures

COOLMASTER

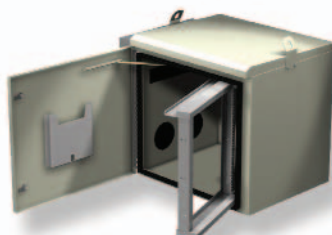
CoolMaster is designed to hold 239-style, single-wide repeater cards for HDSL 2/4, HDSL, T-1, ISDN or DDS networks. All models (8-slot, 16-slot or 24-slot) are fully deployable, constructed from a specially formulated, thermally efficient, corrosion-resistant, marine-grade alloy, designed to withstand the harshest environments.

The 16- and 24-slot models employ the innovative SPC pressure-sealed communications connector that separates the cable stub from the enclosure for ease of handling. This translates into less manpower needed at installation due to significantly reduced weight and bulk.

Enclosures can be replaced in the field without splicing in a new stub. They make installations a snap!

- Front entry, including access to protection without dropping circuits
- Special marine-grade alloy for maximum corrosion protection
- Low profile for narrow manholes
- Rapid entrance enclosure
- Lightweight and easy to install
- Ultra-compact for minimum space requirement
- Allows modular repair or replacement of apparatus case section or cable stub
- Eliminates wasteful and unusable slots, along with deployment record keeping
- Single, multifunction, all-metal air control center

B



Catalog #	Description
(A) 3V208-6110-0414-030	8-slot press, prot, test pins, (1) 30' air T-screened stub
3V208-6110-0114-030	8-slot press, prot, test pins, (1) 30' gel T-screened stub
3V216-6110-1414-030	16-slot press, prot, test pins, (1) 30' air T-screened stub
3V216-6110-1114-030	16-slot press, prot, test pins, (1) 30' gel T-screened stub
3V224-6110-1444-030	24-slot press, prot, test pins, (1) 30' air T-screened stub
3V224-6110-1144-030	24-slot press, prot, test pins, (1) 30' gel T-screened stub

Cabinets

ACCESS CABINETS

The compact size of these aluminum cabinets is ideally suited to numerous industries: telecommunications, wireless, signaling, transportation and CATV. The cabinets come equipped with a pad-lockable door and a fixed standard 19"/23" equipment rack, with an optional swing-out rack available.

- Built from .100 in. aluminum, with a tough powder-coat finish for attractive appearance in harsh environments
- Double-wall roof construction for protection from solar heat
- Pole or pad mount
- Optional features: vented battery pedestal, backup battery power, swing-out equipment rack, high efficiency air-to-air heat exchangers, advanced passive cooling technologies, pole-mount bracket

Standard sizes based on specific space requirements (EIA 1 $\frac{3}{4}$ " spacing per U):

- 10U 2'2" H x 32" W x 18" D
- 13U 2'8" H x 32" W x 18" D
- 17U 3'2" H x 32" W x 18" D
- 20U 3'8" H x 32" W x 18" D
- 23U 4'2" H x 32" W x 18" D

Catalog

(B) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: SQQ

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Mapping Out a New Standard of Service:

Now 3 Million Square Feet of Inventory Available Next Day

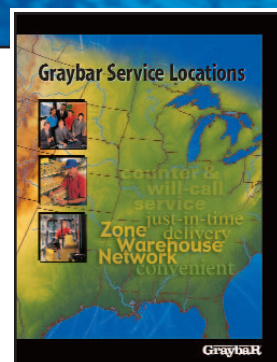
Get the benefit of expanded access to 3 million square feet of inventory without the capital expense. Wherever you need telecommunications equipment, tools and supplies, Graybar has the ability to deliver — FAST (next-day service virtually anywhere in the U.S.). With strategically located Zone Warehouses and more than \$500 million in brand-preferred inventory (1.3 million products from over 4,000 suppliers), you can count on Graybar to exceed your expectations for complete, accurate orders and on-time delivery. So no matter what your location, we've got you covered.

Call Graybar, an employee-owned company with more than 8,000 employees. We'll be sure you get what you want, when you want it. For service you can count on to get the job done, follow the map — all roads lead to Graybar.

Graybar is certified according to ISO 9002 standards, ensuring consistent quality service.



For more information on these and other Graybar services, visit www.graybar.com.
Or call 800-825-5517 (7 a.m. - 5 p.m. CT) for the nearest Graybar location and your
FREE Graybar Service Locations Brochure (#801014E).



Graybar®

Carlton®

LAMSON & SESSIONS



Innerduct and Accessories

PLENUM-GARD®

- For use in Plenum areas per articles 770 and 800 of the NEC
- UL Listed (E151168) and meets UL 2024 standard
- Pre-installed pull tape in sizes 1 in. through 2 in.
- Sequentially marked footage
- Outside diameters meet IPS dimensions.
- Manufactured from KYNAR Flex®, PVDF Resin, a fluoropolymer compound

How to build a Catalog #:

Product	Size	Configuration	Wall	Color	Pull Line	Length
(A) C=Plenum-Gard	E=¾" F=1" G=1¼" H=1½" J=2"	4=Corrugated	X=Standard	1=Orange 2=Blue 3=Gray 4=White 5=Green 6=Black 7=Yellow 8=Red 9=Brown	C=900 lbs. tape	Example: -1000=ft. -1000S=ft. split

RISER-GARD®

- For use in Riser and general purpose applications per articles 770 and 800 of the NEC
- UL Listed (E151168) and meets UL 2024 standard
- Pre-installed pull tape in sizes 1 in. through 2 in.
- Sequentially marked footage
- Outside diameters meet IPS dimensions.

How to build a Catalog #:

Product	Size	Configuration	Wall	Color	Pull Line	Length
(B) D=Riser-Gard	E=¾" F=1" G=1¼" H=1½" J=2"	4=Corrugated	X=Standard	1=Orange 2=Blue 3=Gray 4=White 5=Green 6=Black 7=Yellow 8=Red 9=Brown	C=900 lbs. tape	Example: -1000=ft. -1000S=ft. split



CORRUGATED HIGH-DENSITY POLYETHYLENE (HDPE)

- Ideal for cable pulls under 1,000 ft.
- Lightweight and flexible
- Designed to reduce surface contact when pulling or jetting cable

How to build a Catalog #:

Product	Size	Type	SDR	Options	Splits	Color	Stripes	Tape	Length
(C) A=HDPE	5=1" 6=1¼" 9=1½" 13=2"	D= Corrugated	2= None	E= S= Split Standard	1= 1 way	J= Orange	NN= None	A= B= Empty 1,130 lbs.	1500= ft.



Conduit

BORE-GARD®

- UL Listed
- Designed for horizontal directional drilling
- True 3 in., 4 in., 5 in. and 6 in. I.D., available in easy to handle 10-ft. and 20-ft. lengths
- Fast assembly and fits standard schedule 40 fittings
- Bores up to 1,000 ft. and has strong water-tight joints with cement
- Eliminates the need for chains and backing plate installation

Catalog # Description

(D) BG340SP-010	3" schedule 40 Bore-Gard 10'
BG340SP-020	3" schedule 40 Bore-Gard 20'
BG440SP-010	4" schedule 40 Bore-Gard 10'
BG440SP-020	4" schedule 40 Bore-Gard 20'

Catalog # Description

(D) BG540SP-010	5" schedule 40 Bore-Gard 10'
BG540SP-020	5" schedule 40 Bore-Gard 20'
BG640SP-010	6" schedule 40 Bore-Gard 10'
BG640SP-020	6" schedule 40 Bore-Gard 20'

Supplier Prefix: CAR

The Service Provider

Solutions Guide

800-825-5517 (7 a.m. - 5 p.m. CT) www.graybar.com

Thomas & Betts

Splicing Products



KOLD-N-KLOSE® SPLICE CLOSURE AND SHEATH REPAIR SYSTEM

Thoroughly tested and evaluated to fulfill the needs of the telecommunications industry, the components of the Kold-N-Klose system can be used to serve your specific splicing needs, including simple sheath repair of any length or diameter of cable, and encapsulation of buried or aerial splices. Use on filled or air-core, plastic or lead, and pressurized cable. It is totally mechanical, no heat or flame required, and can be installed under the most severe environmental conditions (-20 to 140 F degrees).

Catalog

(A) To complete a splice or sheath repair, select the appropriate encapsulation kit, plus appropriate sheath repair sleeve material.

SHEATH REPAIR SLEEVES

A tough flexible sleeve material, coated on one side with TBT20® sealant, is used as the outer layer on repairs and splices for long-lasting sealed protection against the environment. They are packaged in rolls, with cable ties included.

Catalog #	Description	Sleeve Width
(B) TBT9105	4' x 5' rolls of sleeve material	4¾"
TBT9205	4' x 5' rolls of sleeve material	7"
TBT9305	4' x 5' rolls of sleeve material	8½"
TBT9405	4' x 5' rolls of sleeve material	12½"
TBT9120	1' x 20' roll of sleeve material	4¾"
TBT9220	1' x 20' roll of sleeve material	7"
TBT9320	1' x 20' roll of sleeve material	8½"
TBT9420	1' x 20' roll of sleeve material	12½"

ENCAPSULATION KIT

These kits are packaged in bulk to permit repairs or splices to cable from 25-pair to 2400-pair at any length or diameter, with no waste. For example, a kit contains enough material to effect eight to 10 repairs or splices on 100- to 200-pair cable or two splices on 1500-pair cable. This reduces inventory requirements.

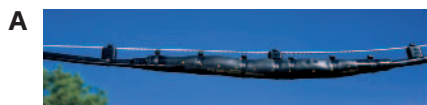
Catalog #	Description
(C) TBT60	Kit contents: strain relief, spacer web, web funnels, KlearWrap™, end tape, splice envelope and Ty-Rap® cable ties
TBT61	Same as TBT60, with the addition of TBT50 pressure tape
TBT62	Same as TBT61, with the addition of TBT20 sealant

Cable Management

DELTEC® CABLE SUPPORT SYSTEM

Here's a user-friendly product designed to provide ease and flexibility in fastening communications cables to messenger strand. It is equally well suited for copper conductor cable, coaxial cable, fiber optic cable and inner duct in aerial applications. The system includes weather-resistant acetal plastic cable straps, marine-grade locking devices and base hanger accessories for specific applications where mounting is required. Stackable spacers accommodate all requirements — no need to stock multiple sizes of individual height spacers. It has many years of proven service in the telecommunications industry.

Catalog #	Description
(D) CSS-100	Cable strap with locking head, 10"
CSS-135	Cable strap with locking head, 13½"
CSS-160	Cable strap with locking head, 16"
CSS-270	Cable strap with locking head, 27"
CSS-50R	50' reel of strap
CSS-5K	5 reels cable strap, 150 locking heads
CSS-B	Base
CSS-H	Hanger
CSS-DWS	Drop wire support
TC5359	Mounting base for masonry
CSS-LH	Locking head
TCP-360	Modular stackable cable spacer
CSS-360	Modular stackable spacer for fiber and coax cable
WT3D	Insulation and cutting tool



Supplier Prefix: TNB

The Service Provider
Solutions Guide

800-825-5517 (7 a.m. - 5 p.m. CT) www.graybar.com

American
Polywater[®]
Corporation

New

A



B



C



D



E



Sunscreen

POLYWATER[®] SW-1 CONSTRUCTION-GRADE SUN PROTECTION WIPE

- SPF 30 wipe protects against sun UVA/UVB rays and is PABA free.
- Large 12 in. x 8 in. towel is conveniently packaged — easy to carry, apply and dispose.
- Sweat and water resistant — contractor grade for tough working conditions
- Leaves a non-greasy protective layer after application

Catalog #	Description	Quantity
(A) SW-1	Pre-saturated SPF 30 sunscreen towelettes	50 per box, 400 per case

Cable Pulling Lubricants

POLYWATER[®] F LIQUID LUBRICANTS

- Pours, pumps, coats evenly and dries slowly
- Superior friction reduction and compatible with all cable and conduit types
- With winter grade, pull in freezing temperatures, safe for humans and environment

Catalog #	Description	Catalog #	Description
(B) F-DRUM	55-gallon drum	(B) F-35	1-quart bottle
F-640	5-gallon pail	WF-640	5-gallon pail (winter grade)
F-320	2½-gallon jug	WF-320	2½-gallon jug (winter grade)
F-128	1-gallon jug	WF-128	1-gallon jug (winter grade)

POLYWATER[®] J GEL LUBRICANTS

- Specification grade — for difficult, multi-bend pulls of cable or innerduct
- Temperature stable — will not separate due to hot weather or freezing
- Apply by hand or pump, coats evenly and dries slowly
- Superior friction reduction and compatible with all cable and conduit types
- Non-combustible residue — the only choice for use on fire-retardant cable jackets

Catalog #	Description	Catalog #	Description
(C) J-DRUM	55-gallon drum	(C) J-35	1-quart bottle
J-640	5-gallon pail	WJ-640	5-gallon pail (winter grade)
J-128	1-gallon jug	WJ-128	1-gallon jug (winter grade)
J-55	½-gallon Front End Pack™ bag		

Cable Cleaners

HYDRASOL[®] CABLE GEL AND FLOODING COMPOUND REMOVER

- Superior cleaning — removes filling gels (ickypic) quickly and neatly
- Versatile — ideal for copper, fiber, coaxial and other voice/data cables
- Safety — unique water-based formula contains no chlorinated solvents
- Economical — reusable and good for multiple cleanings
- Easy to use — available in a variety of convenient packages

Catalog #	Description	Catalog #	Description
(D) HS-DRUM	55-gallon drum	(D) HS-32LR	1-quart bottle, trigger spray
HS-640	5-gallon pail	HS-32	1-quart bottle
HS-384	3 gallons in a 5-gallon pail	HS-16LR	1-pint bottle, trigger spray
HS-128	1-gallon jug	HS-1	Individual saturated wipe
HS-96	3 quarts in a 1-gallon pail		

TYPE FO™ ALCOHOL PREP WIPE FOR FIBER OPTIC CLEANING

- Excellent solvency — cleans glass fibers for better light transmission
- No residue — quickly removes dust, oils and contaminants
- Non-abrasive — safe for delicate optics
- Non-chlorinated — anhydrous alcohol has no water or CFC content
- Convenient — pre-saturated wipes are durable, lintless and disposable

Catalog #	Description
(E) FO-1	Alcohol prep wipe for fiber cleaning

Supplier Prefix: APO

The Service Provider

Solutions Guide

800-825-5517 (7 a.m. – 5 p.m. CT) www.graybar.com



A



Insecticide

WASP AND HORNET KILLER PLUS™ INSECTICIDE

Fast-acting, high-strength insecticide that knocks down and kills spiders, all crawling insects, wasps, hornets, yellow jackets, bees, fire ants, scorpions and other stinging insects on contact. It is plastic safe and contains no chlorinated solvents.

- Will not damage plastic connectors and other insulating materials
- CRC trigger provides a dense, accurate spray that will reach up to 20 ft. to drench harmful insects and their nests.
- The only wasp and hornet killer in the industry with CRC's patented M.S.D.[L.]™ (a current MSDS printed on the reverse side of the product label)
- High dielectric strength of over 40,000V

Catalog #	Description	Units per Case
(A) 14010	20-oz. aerosol trigger	12

B



Hand Cleaner

MECHANIX ORANGE™ CITRUS LOTION HAND CLEANER WITH PUMICE

Formulated with the natural cleaning power of citrus, this fast yet gentle hand cleaner is pH balanced, highly concentrated and very effective at cleaning the toughest soil, grime, ink, oil and paint. Use with or without water.

- Contains no harsh solvents
- Biodegradable formula
- Quickly and effectively removes the toughest soil
- Fortified with pumice for deep cleaning power
- Conditions skin to leave hands feeling clean and fresh
- Fresh citrus scent

Catalog #	Description	Units per Case
(B) SL1712	16-fluid-oz. bottle	12

C



Cable Cleaners

CABLE CLEAN® FIBER OPTIC CLEANER

Cable Clean is a non-chlorinated, quick-drying, high-purity cleaner specifically formulated for use on delicate fiber optic and telecommunication splices and cables without leaving a residue. The formula removes contaminants and charged polar soils, preventing residue that can lead to transmission distortion through spliced cables.

- Contains no 1, 1, 1-Trichloroethane or any other chlorinated solvents
- Non-corrosive, non-conductive and non-staining

Catalog #	Description	Units per Case
(C) 14139	1-quart flip-top bottle	12

D



Cable Pulling Lubricants

2-26® MULTI-PURPOSE PRECISION LUBRICANTS

This is a multi-purpose, plastic-safe lubricant, penetrant and corrosion inhibitor that helps prevent electrical malfunctions caused by water penetration, humidity, condensation or corrosion. 2-26® drives out moisture and leaves a thin, long-lasting film to protect against corrosion. It is excellent for use around modern plastics and insulators.

- Cleans, lubricates, penetrates, loosens and prevents corrosion by displacing moisture
- Restores resistance values and helps stop current leakage
- Helps restore water-damaged electrical equipment
- Convenient 360° spray valve can be sprayed from any position.
- Cleans light soils and contaminants
- Will not harm modern plastics, including polycarbonates, ABS and Noryl®
- Meets 1998 USDA guidelines for use in meat and poultry plants

Catalog #	Description	Units per Case
(D) 02004	6-oz. aerosol	12
02005	16-oz. aerosol	12
02007	16-oz. spray bottle	12

Supplier Prefix: CRC

The Service Provider
Solutions Guide

800-825-5517 (7 a.m. – 5 p.m. CT) www.graybar.com



Power Systems

VMS60 AND VMS75 15A – 75A, -48VDC MODULAR POWER SYSTEM WITH 15A POWER CONVERSION UNIT (PCU) MODULES

The Vortex® power system, with 15A PCUs, is available in two versions and ideal for local loop and -48VDC wireless applications. The VMS60 is 19 in. (48.26cm) wide, has a Meter-Control-Alarm (MCA) module and up to four module positions available for 15A plug-in PCUs/optional equipment. The VMS75 fits 23 in.- (58.42cm) wide applications, consists of a MCA module and has up to five positions for PCUs/optional equipment.

The VMS60 and the VMS75 power systems are designed primarily for local loop applications including: remote terminals, cabinets, CEVs, huts and most applications where a small -48VDC power plant is necessary. VMS power systems are environmentally hardened to withstand hostile environments and are rated for operation in temperature ranges from -40 to 65 C degrees (-40 to 149 F degrees).

Catalog #	Description
(A) 58213000001	19" (48.26cm) VMS60, 60A-capacity shelf
58213000106	23" (58.42cm) VMS75, 75A-capacity shelf
433800234	MCA module, list 58213000012 or list 58213000112
483213800	Installation accessory parts kit, list 58213000074 or list 58213000174
487111500	Plug-in ringing generator module, which provides a redundant single-frequency ringing system of 100VA with transfer capability, list 58213000131 or list 58213000031
428107800	Distribution module, which distributes DC power, list 58213000141 or list 8213000041
433800264	Battery temperature compensation
415103200	Blank PCU module
486530400	15A PCU (rectifier) module
256691501	10A plug-in breakers
256692301	20A plug-in breakers
256693101	30A plug-in breakers
248610700	1.33A fuse
248610900	3A fuse
248611000	5A fuse

Building Entrance Protection (BEP)

R66P25 SERIES 25-PAIR PROTECTION

Catalog #	Description	Input	Output
(B) R66P25QC	25 pair	66 block	66 block
R66P25QCR3B1E (with protection)	25 pair	66 block	66 block
R66P25QCS10	25 pair	10' stub	66 block
R66P25QCS20	25 pair	20' stub	66 block
R66P25QCC	25 pair	66 block	RJ21
R66P25QCCR3B1E (with protection)	25 pair	66 block	RJ21
R66P25S10CD	25 pair	10' stub	RJ21
R66P25S20CD	25 pair	20' stub	RJ21

QC SERIES PROTECTION

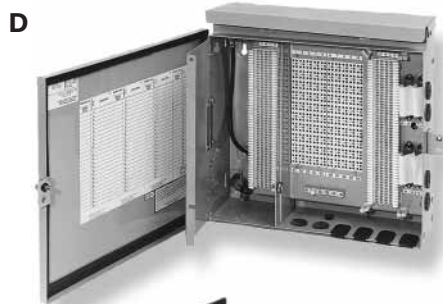
Catalog #	Description	Input	Output
(C) QC713100	10 pair	66 block	66 block
QC713200	20 pair	66 block	66 block
QC305250	25 pair	66 block	66 block
QC305250C	25 pair	66 block	RJ21
QC305500	50 pair	66 block	66 block
QC3051000	100 pair	66 block	66 block

Supplier Prefix: RUP

The Service Provider

Solutions Guide

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Supplier Prefix: RUP

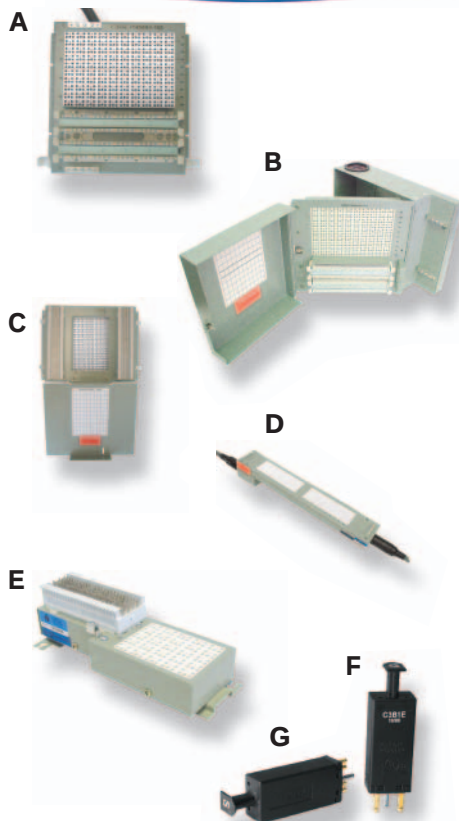
BEP SERIES BUILDING ENTRANCE PROTECTORS

Catalog #	Description	Input	Output
(D) BEPT-X-T	25, 50 or 100 pair	110 block	110 block
BEPT-X-CF	25, 50 or 100 pair	710 connector	110 block
BEPT-X-MM	25, 50 or 100 pair	3M connector	110 block
BEPT-X-SC-Y	25, 50 or 100 pair	6', 12' or 25' stub	110 block
BEPC-X-C	25, 50 or 100 pair	66 block	66 block
BEPC-X-CF	25, 50 or 100 pair	710 connector	66 block
BEPC-X-MM	25, 50 or 100 pair	3M connector	66 block
BEPC-X-SC-Y	25, 50 or 100 pair	6', 12' or 25' stub	66 block

Pair count: X= 25, 50 or 100
Stub length (ft.): Y= 6, 12 or 25

PROTECTION MODULES

Catalog #	Description
(E) R3B1E	Gas protector without heat coil
R4B1E	Gas protector with heat coil
R3B1EJZ	Super-duty gas protector without heat coil
R4B1EJZ	Super-duty gas protector with heat coil
R3B1S	Solid-state protector without test coil
R4B1S	Solid-state protector with test coil



Supplier Prefix: CUZ

Building Entrance Protection (BEP)

BUILDING ENTRANCE TERMINALS (BETS)

- 110 connector, 66 block or cable stub connections, protects up to 100 lines
- Wall or frame mountable, stackable to allow for future service expansion
- Internal splice chamber and covers over incoming and outgoing connections
- External three-position ground connectors accept 6-14 AWG ground wire
- Equipped with an internal fuse link
- Accommodates industry-standard 5-pin protection modules
- Designed to exceed the requirements set forth in Underwriters Laboratories UL 497

PROTECTOR MODULES

- Gas or solid state
- Heavy-duty surge handling capability and balanced operation
- Available with or without PTC sneak-current protection
- Integrated test points
- Rugged, dependable operation
- Documented safe performance, prevents damage by lagging or sneak transients
- Nonradioactive
- UL/cUL Listed and an ISO 9002 certified manufacturer

Catalog #	Description
(A) 1880B1-100	100-pair BET, 25' 26 AWG cable input, 110 connection output
(B) 1880ECA1-100G	100-pair BET, 110 connection input and output with cover and splice chamber
(C) 1890ECT1/NSC-100G	100-pair BET, 66 block connection input and output with cover
(D) 1900A1-100	100-pair BET, 25' 26 AWG cable input, 25' 24 AWG cable output
(E) 2625QC/QC	25-pair BET, 66 block connection input and output
(F) C3B1E	350V gas protector module
C4B1E	350V gas protector module with PTC sneak-current protection
(G) C3B1S-BAL	300V solid-state protector module
C4B1S-BAL	300V solid-state protector module with PTC sneak-current protection

porta systems
CORP.

Building Entrance Protection (BEP)

Porta Systems has the most comprehensive line of UL-Listed Building Entrance Terminals (BETs) in the industry.

BETs safeguard communications equipment from damaging electrical surges on incoming phone lines. They are designed to provide maximum installation efficiency in minimum space.

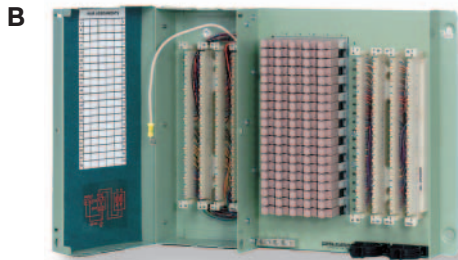


Cover not shown

SERIES 25 BET

- UL Listed for primary protection
- 5-pin gas-tube protectors factory installed — wide variety of protectors available for every application
- Terminations include 66, 110 and factory stub
- Cover included on all models

Catalog #	Description	Input/Output	Pin Configuration
(A) 25025-66-M66PC	25 pair	66/66	5 pin
25050-66-M66PC	50 pair	66/66	5 pin
25100-66-M66PC	100 pair	66/66	5 pin
25025-110-M110PC	25 pair	110/110	5 pin
25050-110-M110PC	50 pair	110/110	5 pin
25100-110-M110PC	100 pair	110/110	5 pin
25025-ST-M66PC	25 pair	Stub/66	5 pin
25050-ST-M66PC	50 pair	Stub/66	5 pin
25100-ST-M66PC	100 pair	Stub/66	5 pin
25025-ST-M110PC	25 pair	Stub/110	5 pin
25050-ST-M110PC	50 pair	Stub/110	5 pin
25100-ST-M110PC	100 pair	Stub/110	5 pin



SERIES 24 BET

- UL Listed for primary protection
- 5-pin or single-pin gas-tube protectors factory installed — wide variety of protectors available for every application
- Terminations include 66, 110, 710, MS² and factory stub — custom configurations available
- Includes a lockable splice chamber with top and bottom cable entry
- Cover available for all models

Catalog #	Description	Input/Output	Pin Configuration
(B) 24025-66-F66P	25 pair	66/66	Single pin
24050-66-F66P	50 pair	66/66	Single pin
24100-66-F66P	100 pair	66/66	Single pin
24025-110-F110P	25 pair	110/110	Single pin
24050-110-F110P	50 pair	110/110	Single pin
24100-110-F110P	100 pair	110/110	Single pin
24025-66-M66P	25 pair	66/66	5 pin
24050-66-M66P	50 pair	66/66	5 pin
24100-66-M66P	100 pair	66/66	5 pin
24025-110-M110P	25 pair	110/110	5 pin
24050-110-M110P	50 pair	110/110	5 pin
24100-110-M110P	100 pair	110/110	5 pin

Supplier Prefix: POT



A



Uninterruptible Power Supplies (UPS)

PRO™ SERIES UPS

- Models are available in 320, 520, 700, 1000 and 1400VA sizes.
- The intelligent microprocessor controls the UPS response to power events.
- The line-interactive topology provides automatic voltage regulation.
- The surge-only receptacle protects a peripheral device.
- Fax/modem/data protection guards voice/data lines from surges and spikes.
- SNMP capable via add-on device for integration into network management systems
- Hot-interchangeable batteries for easy battery replacement
- It includes browser-based Minuteman SentryII™ power management and diagnostic software for advanced monitoring and unattended shutdown.
- Three-year parts and labor warranty for peace of mind
- The \$35,000 Minuteman Platinum Protection Plan® (U.S. and Canada) insures properly connected equipment.

Catalog #	Description
(A) Pro 320	320VA/208W, three UPS and one surge-only outlet
Pro 520	520VA/338W, three UPS and one surge-only outlet
Pro 700	700VA/455W, three UPS and one surge-only outlet
Pro 1000	1000VA/650W, five UPS and one surge-only outlet
Pro 1400	1400VA/910W, five UPS and one surge-only outlet

B



ENTERPRISE™ SERIES UPS

- Models are available in 500, 750, 1100, 1500, 2300 and 3200VA sizes.
- Specifically designed for enterprise-wide networks and challenging environments
- The pure sinewave output provides clean, continuous power for critical equipment.
- The line-interactive voltage regulation protects against all voltage irregularities (sags, surges, spikes and brownouts) and the EMI/RFI filters out line noise and harmonics.
- Three-year parts and labor warranty for peace of mind
- Scalable, unlimited run time with daisy-chained external battery packs
- External battery packs with independent chargers — the industry's fastest recharge
- The double-boost and double-buck voltage regulation extends battery life.
- The space-saving, 16-in. depth accommodates large plugs in cramped quarters.
- SNMP capable for easy, Web-browser-based remote power management
- The Minuteman SentryII power management and diagnostic software is included.
- Fax/modem/data protection guards voice/data lines from surges and spikes.
- Front-access, hot-interchangeable batteries
- Universal design for rack-mount, wall-mount, tower or desktop installation (wall-mount and 23-in. rack kit are optional)
- The \$40,000 Minuteman Platinum Protection Plan (U.S. and Canada) insures properly connected equipment.

Catalog #	Description
(B) E 500	500VA/300W, three UPS and one surge-only outlet
E 750	750VA/450W, three UPS and one surge-only outlet
E 1100	1100VA/660W, five UPS and one surge-only outlet
E 1500	1500VA/900W, five UPS and one surge-only outlet
E 2300	2300VA/1380W, seven UPS and one surge-only outlet
E 3200	3200VA/1920W, seven UPS and one surge-only outlet
E BP1	Standard external battery pack for E 500 – E 1500
E BP2	Standard external battery pack for E 2300 – E 3200
E BP3	High-capacity external battery pack for E 500 – E 1500
E BP4	High-capacity external battery pack for E 2300 – E 3200
Wall-mount kit	Optional wall-mount kit for use on all Enterprise models
23" rack kit for 2U	Optional 23" rack installation kit for E 500 – E 1500
23" rack kit for 3U	Optional 23" rack installation kit for E 2300 – E 3200

Supplier Prefix: PSY

MINUTEMAN®

UNINTERRUPTIBLE POWER SUPPLIES

A



Uninterruptible Power Supplies (UPS)

SMARTSINE™ SERIES UPS

- The true sinewave output provides clean, continuous power for critical equipment.
- The line-interactive design provides automatic voltage regulation to adjust minor voltage fluctuations.
- Eight receptacles on each unit provide backup and protection for several devices at once.
- The independent battery bypass allows the unit to provide surge/spike protection and voltage regulation with weak or dead batteries.
- Its built-in network/fax/modem protection keeps surges and spikes from entering via voice/data transmission lines.
- An expansion slot allows the addition of accessory options such as a multi-function Web/SNMP card or an environmental monitoring device kit.
- Each unit includes Minuteman SentryII™ power management and diagnostic software for monitoring and control.
- Three-year parts and labor warranty for peace of mind
- Each unit includes the \$40,000 Minuteman Platinum Protection Plan® (U. S. and Canada only).

Catalog #	Description
(A) S 700	700VA/500W, eight UPS receptacles
S 1000	1000VA/700W, eight UPS receptacles
S 1400	1400VA/1000W, eight UPS receptacles
S 2000	2000VA/1400W, eight UPS receptacles

Supplier Prefix: PSY



Reliable Electronic Solutions

A



B



C



D



Protection Products

2360 SERIES INTEGRATED PROTECTION ASSEMBLY (IPA)

Bourns® IPA modules are part of a fully integrated and comprehensive solution to simplify deployment of high-speed broadband services. The IPA combines Multi-Stage Station Protection (MSP®), Telco network termination and sealed subscriber test jacks into a single, easy-to-install module. Optional capabilities include half-ringers and balanced-capacitance units for deployment on balance-sensitive DSL systems. The IPA units are designed for installation in a Bourns IPA Network Interface Device (NID) with models available to fit other manufacturers' NID enclosures.

Catalog #	Description
(A) 2360	IPA compatible with CCS 2006 series

MSP

Bourns MSP is a new generation telecommunications protector designed to be the best all-around choice for protecting copper-pair voiceband and high-speed data circuits in broadband applications. Combining the advantages of gas-tube and solid-state protection, Bourns MSP protectors integrate three advanced technologies: a proprietary sixth-generation gas tube, a precision-matched metal-oxide varistor and a patented, switch-grade, fail-safe mechanism. Bourns MSP products can be used universally for broadband voice and data circuits including ISDN, ADSL, HDSL, VDSL, high-speed Ethernet and 10Base-T. These products provide the most economical, reliable and effective choice for protecting broadband services.

Catalog #	Description
(B) 2410-31-MSP	5-pin MSP
(C) 2377-45-HS	Maximum-duty MSP
(D) 2377-45-BC	Balance-capacitance MSP
2378-35-HS	Heavy-duty MSP

Supplier Prefix: BOU

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Solutions Guide

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Legendary Reliability™

Uninterruptible Power Supplies (UPS)

SMART-UPS® — PERFORMANCE POWER PROTECTION FOR SERVERS AND NETWORKS

- AVR Boost and AVR Trim automatic voltage regulation
- Free PowerChute® software for advanced power management
- Optional SmartSlot® accessories customize functionality
- Network-grade surge suppression and lightning protection
- Extendable run times available, automatic battery and UPS self-testing
- Two-year warranty and \$150,000 lifetime equipment protection policy



A



B



C



Catalog #	Description	Watts/VA	Typical Run Time	Outlets
(A) APC Smart-UPS				
SU420NET	APC Smart-UPS 420 ¹	260/420	13.6 minutes	4
SU620NET	APC Smart-UPS 620 ¹	390/620	15.3 minutes	4
SU700NET	APC Smart-UPS 700	450/700	18.2 minutes	4
SUA1000	APC Smart-UPS 1000 (+USB)	670/1000	20.1 minutes	8
SUA1500	APC Smart-UPS 1500 (+USB)	980/1440	22.8 minutes	8
SU2200NET	APC Smart-UPS 2200 ²	1600/2200	32.3 minutes	8
SU3000NET	APC Smart-UPS 3000 ³	2250/3000	18.1 minutes	8
(B) APC Smart-UPS rack mount				
SU700RM2U	APC Smart-UPS 700RM 2U	450/700	18.2 minutes	6
SU1000RM2U	APC Smart-UPS 1000RM 2U	670/1000	29.5 minutes	6
SU1400RM2U	APC Smart-UPS 1400RM 2U	950/1400	26.5 minutes	6
SU2200RM3U	APC Smart-UPS 2200RM 3U ²	1600/2200	23.2 minutes	8
SU3000RM3U	APC Smart-UPS 3000RM 3U ³	2250/3000	12.4 minutes	8
SU5000RM5U	APC Smart-UPS 3000RM 5U ³	2250/3000	18.1 minutes	8
APC PowerStack (SmartSlot and extendable run time not available)				
PS250	APC PowerStack 250 ¹	165/250	30 minutes	4
PS450	APC PowerStack 450 ¹	280/450	18 minutes	4

Pure sine output: ¹ Stepped sine, ² Ships with 20A plug, ³ Ships with 30A plug

SYM METRA® POWER ARRAY™ — SCALABLE, REDUNDANT POWER PROTECTION FOR CENTRALIZED SERVERS, DATA CENTERS AND HIGH-AVAILABILITY APPLICATIONS

- Tower and rack-mount versions with high overload capacity
- The N+1 redundancy ensures maximum uptime and continuous availability.
- Web, SNMP and Telnet management card included
- PowerChute network shutdown included
- Intelligent, extended run time battery frames provide unlimited run time.
- Power-factor correction and remote power-off device
- Two-year standard warranty, worldwide

Catalog #	Description
(C) APC Symmetra rack mount	
SYH4K6RMT	Symmetra rack mount 4kVA, expands to 6kVA
SYH6K6RMT	Symmetra rack mount 6kVA, expands to 6kVA
SYP8K12RMT	Symmetra rack mount 8kVA, expands to 16kVA or 12kVA N+1
SYP12K12RMT	Symmetra rack mount 12kVA, expands to 16kVA or 12kVA N+1
SYH2K6RMT-P1	Symmetra rack mount 2kVA, expands to 6kVA with transformer
SYH4K6RMT-P1	Symmetra rack mount 4kVA, expands to 6kVA with transformer
SYH6K6RMT-P1	Symmetra rack mount 6kVA bundled with transformer
SYP8K12RMT-P1	Symmetra rack mount 8kVA, expands to 16kVA or 12kVA N+1 with transformer
SYP12K12RMT-P1	Symmetra rack mount 12kVA, expands to 16kVA or 12kVA N+1 with transformer
SYP12K12RMT-P2	Symmetra rack mount 12kVA, expands to 16kVA or 12kVA N+1 with two transformers
APC Symmetra tower	
SY4KEX	Symmetra 4kVA, scalable to 8kVA N+1
SY8K	Symmetra 8kVA, scalable to 8kVA N+1
SY8KEX	Symmetra 8kVA, scalable to 16kVA N+1
SY12KEX	Symmetra 12kVA, scalable to 16kVA N+1
SY16K	Symmetra 16kVA, scalable to 16kVA N+1
SY8KEXBX120	Symmetra 8kVA, scalable to 16kVA N+1, black
SY12KEXBX120	Symmetra 12kVA, scalable to 16kVA N+1, black
SY16KEXBX120	Symmetra 16kVA, scalable to 16kVA N+1, black

Supplier Prefix: APC

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Legendary Reliability™

A



Power Systems

POWERSTRUXURE™

APC PowerStruXure is a Scalable Data Center Architecture for Infrastructure On-demand™ from 1.5kW to 5MW. This architecture provides a patent-pending, systematic approach to building data center infrastructure utilizing standardized, pre-assembled components. PowerStruXure is vendor neutral and highly compatible with all major server and Internet-working solution vendors including: Compaq, Dell, IBM, HP, Sun, Cisco, Lucent, Nortel and more.

Meet these five top challenges with PowerStruXure:

Data Center Challenges

1. Optimize capital investment and available space
2. Adapt to ever-changing IT requirements
3. Accelerate speed of deployment
4. Lower the cost of service contracts
5. Increase availability per dollar

PowerStruXure Solution

This pay-as-you-grow solution prevents the undersizing and oversizing of the system's capacity.

It's easy to adapt to changing wattage requirements in the rack with single- or multi-branch rack-mount PDUs.

The electrical/physical modularity provides for rapid installation with minimal engineering.

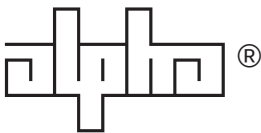
The simplicity of the system design and intelligent modular parts reduce service costs.

A building-block design moves redundancy closer to the load and compartmentalizes potential failures.

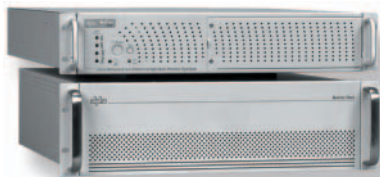
Catalog

(A) For a design to fit your specific needs, contact your local Graybar representative.

Supplier Prefix: APC



A



Uninterruptible Power Supplies (UPS)

Safeguard your business and revenues with a reliable, cost-efficient UPS from Alpha Technologies.

ALI PLUS™ SERIES UPS

Alpha's new multi-mount ALI Plus is a microprocessor-controlled, pure-sine-wave, line-interactive UPS using advanced Auto Voltage Regulation (AVR) with double boost and buck.

Catalog #	Description
(A)	Best-value multi-mount (rack, tower, wall) UPS*
ALI PLUS 700	ALI Plus 700VA
ALI PLUS 1000	ALI Plus 1000VA
ALI PLUS 1500	ALI Plus 1500VA
ALI PLUS 2200	ALI Plus 2200VA
ALI PLUS 3000	ALI Plus 3000VA

*Extended battery backup run time available

CFR® SERIES UPS

Alpha's CFR rack and tower-mount UPS systems provide safe, clean, reliable power protection for mission-critical applications. Complete input to output isolation provides the industry's best surge and lightning protection. The CFR's unique microprocessor design provides efficiency ratings up to 92 percent. It is SNMP and modem compatible.

Catalog #	Description
(B)	CFR Series UPS
CFR 600	CFR 600VA
CFR 1000/1000RM	CFR 1000VA*
CFR 1500/1500RM	CFR 1500VA*
CFR 2000	CFR 2000VA
CFR 2500	CFR 2500VA
CFR 3000/3000RM	CFR 3000VA*
CFR 5000/5000RM	CFR 5000VA*
CFR 7500	CFR 7500VA
CFR 10K	CFR 10KVA
CFR 15K	CFR 15KVA

*Available in rack mount

B



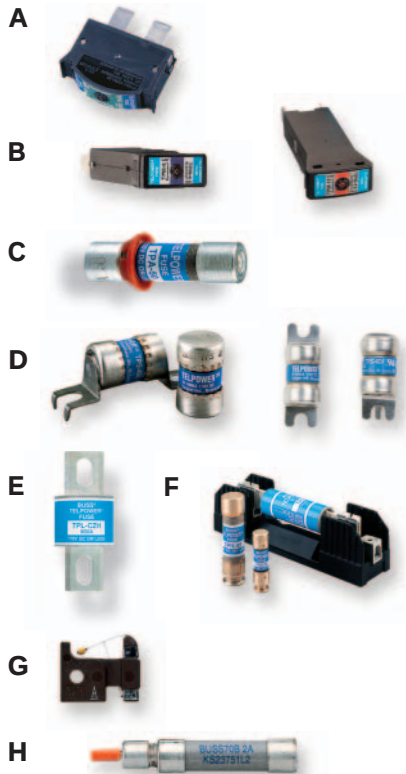
Supplier Prefix: ATI

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COOPER Bussmann



Supplier Prefix: BUS

Fuses

TELPOWER® DC POWER DISTRIBUTION FUSES

Catalog #	Description
(A) TPC-X	TPC: Telpower Compact Fuse 3A – 125A, 80VDC, 100kA IR, LED indication, current limiting
(B) TPM-X	TPM: Telpower Miniature Fuse 3A – 30A, 80VDC, 20kA IR, LED indication, current limiting
(C) TPA-X	TPA: Telpower Indicating Fuse 3A – 50A, 170VDC, 100kA IR
TPA-B-X	TPA-B-X: Telpower Indicating Fuse 20A – 30A, 65VDC, 20kA IR
(D) TPS-X	TPS: Telpower Fuse 1A – 70A, 170VDC, 100kA IR
(E) TPL*	TPL: Telpower Current-Limiting Fuse 70A – 800A, 170VDC, 100kA IR
(F) TPN-X	TPN: Telpower Current-Limiting Fuse 1A – 600A, 170VDC, 100kA IR

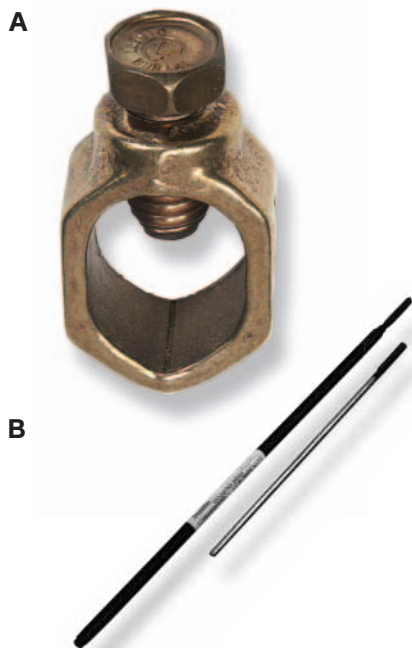
*Add letter code to indicate Amp rating
X= Amp rating

TELPOWER® INDICATING FUSES

Catalog #	Description
(G) GMT-XA	GMT: Fast-Acting Indicating Fuse 18/100 – 15A, 125VDC, GMT-A: Alarm Fuse for Disconnect Switches
(H) 70*	70 Series Indicating Fuse 1/10 – 10A, 300VDC

*Add letter code to indicate Amp rating
X= Amp rating

Thomas & Betts



Supplier Prefix: TNB

Grounding Products

BLACKBURN® UL-LISTED GROUND ROD CLAMPS

These clamps are cast of a high-strength, corrosion-resistant copper alloy. Both hex-head and socket-set screws are available. The long bearing surface of the clamp on the ground wire secures the ground connection. They are UL Listed for direct burial. Budget-line and heavy-duty versions are available.

Catalog #	Description	Nominal Rod Diameter	Wire Range Maximum/Minimum
(A) JAB12	Socket-set screw clamp	½"	2 stranded/10 solid
JAB12H	Hex-head bolt clamp	½"	2 stranded/10 solid
JAB58	Socket-set screw clamp	⅝"	1/0 stranded/8 solid
JAB58H	Hex-head bolt clamp	⅝"	1/0 stranded/8 solid
JAB34	Socket-set screw clamp	¾"	3/0 stranded/8 solid
JAB34H	Hex-head bolt clamp	¾"	3/0 stranded/8 solid
G3	Hex-head bolt clamp	⅝"	4 stranded/10 solid
G4	Hex-head bolt clamp	½"	2 stranded/10 solid
G5	Hex-head bolt clamp	⅝"	2 stranded/10 solid

BLACKBURN GROUND ROD DRIVERS

For installing ground rods, there is no safer, simpler or more effective tool. It can be used on all types of ground rods, including copper bonded, galvanized and stainless steel. Integral inserts prevent the driver from slipping off the rod near ground level.

Catalog #	Description	Weight	Maximum Rod Diameter
(B) TBRD58	5' ground rod driver, ⅝" insert	25 lbs.	1⅞"
TBRD34	5' ground rod driver, ¾" insert	25 lbs.	¾"



A



Crimping Tools

3M™ E-9R CRIMPING TOOL

The 3M E-9R crimping tool is the latest innovation in industry-leading Scotchlok™ cable connection technology for telecom applications.

This lightweight, hand-held tool features single-stroke, parallel crimping action with a work-saving 10:1 mechanical advantage. The tool's innovative ratchet-release design indicates a positive crimp, automatically releasing after each successful connection. An integrated wire cutter allows the user to trim conductors prior to each connection without changing tools. These features and the tool's ergonomic design enhance user productivity by reducing fatigue and eliminating costly time-consuming misconnects.

Catalog #	Description	Quantity per Carton
(A) 80-6111-3271-5	E-9R ratchet crimping tool	10

B



Test Equipment

3M DYNATEL™ 965DSP/ADSL SUBSCRIBER LOOP ANALYZER

As the newest member of the 3M Dynatel family, the 965DSP/ADSL subscriber loop analyzer test set combines up to 12 different test sets into one, state-of-the-art, all-function unit.

- Designed for prequalification of the ADSL lines
- Designed for fault diagnosis of ADSL lines
- Tests between the protector and the DSLAM
- Includes an active modem
- Measures upstream and downstream data rates
- Signal-to-noise ratio
- Transmits and receives power levels and error rates

Catalog #	Description
(B) 965DSP/SA-SN	Subscriber loop analyzer with spectrum analyzer and single needle clip
965DSP/TDR/1343	Combo subscriber loop analyzer, TDR, far-end device II with bed-of-nails clips
965DSP-A/ADSL/BON	Subscriber loop analyzer with modem tester bed-of-nails clips
965DSP-A/ADSL/SN	Subscriber loop analyzer with modem tester single needle clip
965DSP-A/SA/ADSL/BON	Subscriber loop analyzer with spectrum analyzer and modem tester bed-of-nails clips
965DSP-A/SA/ADSL/SN	Subscriber loop analyzer with spectrum analyzer and modem tester single needle clip
965DSP-A/SA/FEDII/BON	Combo subscriber loop analyzer, TDR, spectrum analyzer, far-end device II with bed-of-nails clips
965DSP-A/TDR/WB	Subscriber loop analyzer
965DSP-B	Subscriber loop analyzer without TDR
965DSP-B/1343	Combo subscriber loop analyzer without TDR, far-end device II with bed-of-nails clips
965DSP-IR	IR adapter cable



Supplier Prefix: MMM

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Cable Locators

3M™ DYNATEL™ 2200M SERIES LOCATING PRODUCTS

We are happy to announce the launching of the newest member of the 3M Dynatel family, the 2200M series locators.

- New design for increased sensitivity and depth accuracy
- Market depth estimation
- Software-configurable features
- Help menu
- PC interface for data transfer and software upgradability
- Ability to read and write to new 1400 series I.D. markers
- Best-in-class sensitivity

Catalog #	Description
(C) 2250M-ID/UC3W-RT	Ultra-advanced cable/pipe locator for U.S. communication, 3W with I.D. capacity
2250M-ID/UC5W-RT	Ultra-advanced cable/pipe locator for U.S. communication, 5W with I.D. capacity
2250M-ID/UU3W-RT	Ultra-advanced cable/pipe locator for U.S. utility, 3W with I.D. capacity
2250M-ID/UU5W-RT	Ultra-advanced cable/pipe locator for U.S. utility, 5W with I.D. capacity
2250M-UC3W/RT	Ultra-advanced cable/pipe locator for U.S. communication, 3W
2250M-UC5W/RT	Ultra-advanced cable/pipe locator for U.S. communication, 5W
2250M-UR	Ultra-advanced cable/pipe locator for U.S. receiver
2250M-UU3W/RT	Ultra-advanced cable/pipe locator for U.S. utility, 3W
2250M-UU5W/RT	Ultra-advanced cable/pipe locator for U.S. utility, 5W
2250-U3P3	Ultra-advanced cable locator for power, 3" coupler
2250-U3T3	Ultra-advanced cable locator for Telco, 3W, 3" coupler
2250-U3TN	Ultra-advanced cable locator for Telco, 3W
2250-U5CNTR/B/3YR	Advanced cable locator for contractor, 5W, 3" and 6" couplers
2250-U5P3/A	Advanced cable locator for power, 5W, 3" coupler with external DC input
2250-U5T3/A	Advanced cable locator for Telco, 5W, 3" coupler with external DC power

Marking Products

EMS-ID MARKER SYSTEM

- I.D. markers contain a unique I.D. number
- I.D. markers contain facility-specific information
- I.D. locators locate all markers
- I.D. locators read and write I.D. markers
- Scans up to two marker frequencies simultaneously
- PC interface for data transfer and software upgrade

Catalog #	Description
(D) 1420EMS-ID	Marker locator, read and write
1421-XR/iD	I.D. extended range 5' ball marker for telephones
1422-XR/iD	I.D. extended range 5' ball marker for power
1423-XR/iD	I.D. extended range 5' ball marker for water
1424-XR/iD	I.D. extended range 5' ball marker for wastewater
1425-XR/iD	I.D. extended range 5' ball marker for gas
1427-XR/iD	I.D. extended range 5' ball marker for communication/CATV applications
1428-XR/iD	I.D. extended range 5' ball marker for general purpose/RCLMD water applications

Supplier Prefix: MMM

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Solutions Guide

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A



Labeling Products

Brady labels are specially designed and sized for all data center, POP site and Central Office applications, including those that need permanent aggressive adhesion.

TLS2200® THERMAL TRANSFER PRINTER

- Thermal transfer printing for permanent, quick and clear printing
- Hand-held, lightweight (2.75 lbs.) and easy to use, with no calibration required
- Internal memory to store labels and create lists
- PC compatibility for direct printing from Brady's LabelMark™ software
- A special public networks font size set ($\frac{1}{8}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{7}{16}$ ", $\frac{1}{2}$ ", $\frac{3}{4}$ " and 1") can be downloaded from Brady's tls2200.com Web site for free.

Catalog #	Description
(A) TLS2200	Printer (system includes hard case, R6210 ribbon, battery pack, battery charger, manual, communications cable, test labels (PTL-19-423) and one cleaning card)

B



TLS PC LINK™ THERMAL LABELING SYSTEM

- Easy-to-use, desktop or portable versatility, with no calibration required
- Includes LabelMark labeling software
- Link to a desktop PC for easier label design
- Import labels from Microsoft® Word and Excel via ODBC and ASCII formats
- Easy template creation for frequently used label lists

Catalog #	Description
(A) TLSPC	Printer system includes: LabelMark labeling software, rechargeable battery pack, power supply/battery charger, R6210 ribbon, sample labels (PTL-19-423), Quick Start Guide, manuals, communications cable and Windows™ drivers.

C



LABELMARK LABELING SOFTWARE

- Print directly to Brady's TLS2200 and TLS PC Link printers, as well as inkjet and laser printers
- Import labels from Microsoft Word and Excel, via ODBC and ASCII formats
- Easy template creation for frequently used label lists

Catalog #	Description
(B) LM	CD-ROM labeling software

RACK AND GENERAL I.D. LABELS

The following materials are available for rack and general I.D. labels: matte-white permanent polyolefin (B-425), clear glossy polyester (B-432), ultra-aggressive glossy polyester for powder-coated surfaces (B-483), ultra-aggressive matte polyester for powder-coated surfaces (B-489).

See chart below for label sizes and suggested applications. Note: B432, B483 and B489 materials are available in additional label sizes. Red, white and blue ribbon colors are also available.

Catalog #	Description	Size
(C) PTL-61-483	Shelf label	$\frac{1}{2}$ " x 2" (12.7mm x 50.8mm)
PTL-62-483	Rack/end aisle label	$\frac{3}{4}$ " x 4" (19.05mm x 101.6mm)
PTL-63-483	DWDM/site names label	$\frac{3}{4}$ " x 8" (19.05mm x 203.2mm)
PTL-65-483	Shelf label	$1\frac{3}{16}$ " x 1" (34.93mm x 25.4mm)
PTL-101-432	Panel/general I.D. label	$\frac{1}{4}$ " (6.35mm) x continuous
PTL-101-483	Panel/general I.D. label	$\frac{1}{4}$ " (6.35mm) x continuous
PTL-8-432	Shelf label	$\frac{1}{2}$ " (12.7mm) x continuous
PTL-8-483	Shelf label	$\frac{1}{2}$ " (12.7mm) x continuous
PTL-42-432	General I.D. label	1" (25.4mm) x continuous
PTL-42-483	General I.D. label	1" (25.4mm) x continuous
PTL-100-432*	Rack/general I.D. label	$1\frac{3}{10}$ " (33.02mm) x continuous
PTL-100-483*	Rack/general I.D. label	$1\frac{3}{10}$ " (33.02mm) x continuous
PTL-43-432	Rack/general I.D. label	$1\frac{9}{10}$ " (48.26mm) x continuous
PTL-43-483	General I.D. label	$1\frac{9}{10}$ " (48.26mm) x continuous

*This is the minimum width continuous tape needed to print a $\frac{3}{4}$ " font.

Supplier Prefix: BRA

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FIBER, COAX AND BACKBONE CABLE LABELS

Fiber, coax and backbone cable labels come in matte-white permanent polyolefin (B-425) and self-laminating vinyl (B-427). All B-427 labels are available in yellow, gray, orange, purple, green, blue, brown and red.



Catalog #	Description	Size
(D) PTL-31-427-XX	Fiber/coax label	1" x 1½" (25.4mm x 38.1mm)
PTL-21-427-XX	Fiber/coax label	1" x 2½" (25.4mm x 63.5mm)
PTL-64-427*	Fiber/coax label	1" x 3¾" (25.4mm x 85.73mm)
PTL-23-427-XX	Backbone label	1" x 4" (25.4mm x 101.6mm)
PTL-32-427-XX	Fiber/coax label	1½" x 1½" (38.1mm x 38.1mm)
PTL-33-427-XX	Backbone label	1½" x 4" (38.1mm x 101.6mm)
PTL-34-427-XX	Backbone label	1½" x 6" (38.1mm x 152.4mm)
PTLFP-01-425	Fiber/coax label	1.181" x 0.394" (30mm x 10mm)
PTLFT-01-425	Fiber/coax label	1.181" x 0.394" (30mm x 10mm)
PTL-66-427*	Backbone label	1.94" x 3.15" (49.23mm x 80mm)

*Available in white only

XX= Color: yellow (YL), gray (GY), orange (OR), purple (PL), green (GN), blue (BL), brown (BR) and red (RD)



POWER AND GROUND CABLE LABELS

Permanent glossy polyester (B-422), clear glossy polyester (B-432) and ultra-aggressive glossy polyester (B-483) are available for power and ground cable labels.

Catalog #	Description	Size
(E) PTL-7-422	145C and 145P tags	½" x ½" (12.7mm x 12.7mm)
PTL-7-432	145C and 145P tags	½" x ½" (12.7mm x 12.7mm)
PTL-17-432	145P tags	1" x ½" (25.4mm x 12.7mm)
PTL-17-483	145P tags	1" x ½" (25.4mm x 12.7mm)

Supplier Prefix: BRA

Splicing Products

FSM-40S FUSION SPLICER KIT

The FSM-40S delivers the benefits of PAS core alignment splicing in a field-friendly, mini-splicer package that comes with a CT-20 cleaver. Ergonomic features allow the FSM-40S to be used in difficult aerial taut-sheath splicing conditions. This splicer has been designed for use in harsh outdoor conditions and features an innovative wind protector.

Catalog #	Description
(A) S012796	Fusion splicer kit

Test Equipment

TELECOM CLEANING, INSPECTION AND TEST KIT

The telecom cleaning, inspection and test kit includes everything required for maintaining fiber optic singlemode networks. The SLP6-CIT+ is packaged in a rugged field carrying case and includes: OPM6-3 optical power meter, OLS6-DS 1310/1550 nm laser source, HiLite visible fault finder, OFI200B optical fiber identifier, OFS300-200C optical inspection scope, FCC-02R connector cleaner and ACT-01 adapter cleaning tips.

Catalog #	Description
(B) SLP6-CIT+	Telecom cleaning, inspection and test kit

Fiber Optic Cable Connector Cleaner

FCC-02R FERRULE CONNECTOR CLEANER AND REFILL

The Cletop automatic ferrule connector cleaner quickly and effectively cleans fiber optic connectors without the need for alcohol or solvent wipes. The dry woven cloth effectively removes dirt, dust, oil, grease and debris from the connector and end face of FC, SC and ST connectors.

Catalog #	Description
(C) C036692	FCC-02R ferrule connector cleaner
C036684	Refill for connector cleaner

Supplier Prefix: ALC

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Solutions Guide

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Thomas & Betts

A



Crimping Tools

MANUAL COMPRESSION TOOLS

Use these tools to install copper and aluminum connectors. They include a Shure Stake® mechanism. Installing dies are color coded and die-code embossed.

Catalog #	Description	Installs
(A) TBM5S	Tool includes color-coded installation dies	#8 through 250 kcmil copper connectors and #10 to 4/0 aluminum
TBM6S	Tool comes complete with plastic carrying case and wire brush	#8 through 500 kcmil copper lugs, splices and taps and #10 through 350 kcmil aluminum lugs and splices

B



TBM21E MANUAL COMPRESSION TOOL

The TBM21E installs lugs, splices and C-taps over a wire range of #8 to #2 copper and #10 to #6 aluminum. It also installs up to the green color-coded C-Taps. A rotary color-coded die wheel is rotated into position and each die has die-code embossing. Number of crimps varies by connector.

Catalog #	Description
(B) TBM21E	Manual compression tool

C



Splicing Products

710 CUTTER PRESSER TOOL AND ACCESSORIES

Using the appropriate 710 module, this tool provides in-line bridge and half-tap splicing. It is completely mechanical (no hydraulics), dependable and easy to use.

Catalog #	Description	Maintenance Kit	Carrying Case
(C) C7342	710 cutter presser tool only	No	No
C7340	710 cutter presser complete kit	Yes	Yes

Supplier Prefix: TNB



A

TIA/EIA-606-A-
Compliant
Labeling

Labeling Products

PANACEA™ LS7 HAND-HELD THERMAL TRANSFER PRINTER

The LS7 is the only economical alternative for on-site labeling that doesn't sacrifice features. Use the LS7 for easy marking of wires, terminal blocks, bins, components and more without wasting setup time and labels.

- Fast-loading label cassettes for easy label changes
- Alpha and numeric serialization, bar code printing and file storage memory
- Batteries and hard-side case included

Catalog #	Description
(A) LS7	Hand-held thermal transfer printer

Supplier Prefix: PAN

The Service Provider

Solutions Guide

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A



Test Equipment

GX SERIES TONE AND PROBE

Designed for the telecom professional, this kit is for use on single conductors, twisted pairs, coax cables and de-energized electrical wiring.

- Three selectable tones
- Two-line polarity indication
- High- and low-power output

Catalog #	Description
(A) 711K	Professional tone and probe kit
200GX	Inductive amplifier probe
77GX	Tone generator
77GX2	Tone generator with bed-of-nails clips

B



SIDEKICK™ T&N

The Sidekick is used in every major telephone company in the United States. It quickly and accurately uncovers intermittent troubles using the patented stress test and leakage test to determine the stressed noise susceptibility of dry and working pairs.

- Single setup for testing tip-ring, tip-ground and ring-ground
- Measures resistance, AC/DC volts and capacitive kick
- Provides tone for conductor identification

Catalog #	Description
(B) 1137-5000	Sidekick T&N
1134-5020	Sidekick 7B

C



Cable Locators

OMNI MARKER™ BURIED CABLE MARKERS

The Omni Marker electronically marks and relocates buried facilities. It has a high-reliability design that lasts longer than the outside plant.

- Uniform spherical RF field in every direction
- Easily located up to 5 ft. away
- Lifetime warranty

Catalog #	Description
(C) 160	Power Omni Marker
161	Water Omni Marker
162	Sanitary Omni Marker
163	Telephone Omni Marker
164	Gas Omni Marker
165	Cable TV Omni Marker

Supplier Prefix: TPO



A



B



C



D



E



Test Equipment

TS®44 DELUXE TEST SET

The new TS44 DLX test set is equipped with new DataSafe® Pro data-protection technology. It features superior high-impedance monitoring, data lockout and lockout override, making the user completely safe in talk, monitor or override mode. This intelligent test set will check for normal POTS voltage and the presence of data the moment it is clipped on the line. Data lockout and override protection will alert the technician to the presence of data and only allow override if normal POTS voltage is detected. New patent-pending filtering technology allows a technician to safely draw dial tone on a live DSL/POTS shared line to test the POTS service, while protecting the DSL from downing or disruption. This rugged test set has a two-way speakerphone and is waterproof.

Catalog #	Description
(A) 44801-009	TS44 deluxe test set

TS®42 DELUXE TEST SET

The new TS42 DLX test set is waterproof, DataSafe® and DropSafe™. The TS42 DLX has testing capability (high and low voltage, plus low current) and a two-way speakerphone for truly hands-free use.

Catalog #	Description
(B) 42801-009	TS42 deluxe test set

TS®100 CABLE FAULT FINDER

The TS100 cable fault finder is three tools in one: 1) locates distance to opens or shorts; 2) measures cable on a reel or in a box; 3) provides five tones with patented power tone generator, allowing the user to short the far end and hear a change in tone when the correct pair has been identified. It is easy to use the single-button operation and easy to read the LCD display. The TS100 saves time and money.

Catalog #	Description
(C) 26500-000 Set	TS100 cable fault finder

Tool Kits

PRO-TOOL™ KIT IS40 AND IS50

The most essential tools for electrical and telecom technicians are in a new, sleek form-fitting PVC Dur-a-Grip™ tool pouch. It holds tools securely inside, even upside down. The following items are included in these cost-saving kits:

Pro-Tool Kit IS40

- D814™ impact tool
- Electrician's D-Snips™
- Cable stripper
- EverSharp™ 66/110 cut blade
- ProbePic

Pro-Tool Kit IS50

- D914S™ impact tool
- Electrician's D-Snips
- Cable stripper
- EverSharp 66/110 cut blade

Catalog #	Description
(D) 11291-000	Pro-Tool kit IS40
(E) 11292-000	Pro-Tool kit IS50
10061-000	D914S handle
10054-000	D814 handle
10178-600	EverSharp 66/110 cut blade
44300-000	Electrician's D-Snips
10204-000	Cable stripper
44600-000	ProbePic

Supplier Prefix: DRA

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Tools



6-IN. CONNECTOR CRIMPING PLIERS

Use Klein crimping pliers to crimp and seat UG, UR and UY connectors. Features include induction-hardened cutting knives, a hot-riveted joint and plastic-dipped handles.

Catalog #	Description
(A) D234-6	Connector crimping pliers



ELECTRICIAN'S SCISSORS WITH STRIPPING NOTCHES

These scissors strip 19- and 23-gauge wire. They are nickel plated and have an adjustable screw hinge and serrated lower blade.

Catalog #	Description
(B) 2100-7	Electrician's scissors with stripping notches



CABLE SPLICER

A coping-type blade made of the finest cutlery steel is featured on this cable splicer. For ease of use, it also has a non-slip plastic handle. Blade length is 1 $\frac{3}{4}$ in. with an overall length of 6 $\frac{3}{4}$ in.

Catalog #	Description
(C) 44200	Cable splicer



9½-IN. CABLE CUTTER

The Klein 9½-in. cable cutter has high-leverage, cable-gripping, shear-type jaws and plastic-dipped handles.

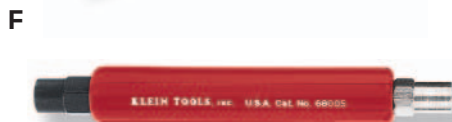
Catalog #	Description
(D) 63050	9½" cable cutter



6⅝-IN. LONG-NOSE SIDE-CUTTING PLIERS

The pliers feature standard cutting knives at the hinge and plastic-dipped handles. They wrap, loop and cut.

Catalog #	Description
(E) D203-6	6⅝" long-nose side-cutting pliers



CAN WRENCH FOR ⅜ IN. AND ⅞ IN. HEX NUTS

Wrench is 7 in. long, with a 1-in. diameter handle. Sockets are heat-treated alloy steel and handle is made of high-impact, break-resistant material.

Catalog #	Description
(F) 68005	Can wrench for ⅜" and ⅞" hex nuts



#2 PHILLIPS-TIP, 4-IN.-SHANK, CUSHION-GRIP SCREWDRIVER

Screwdriver has a round shank, Profilated® tip and overall length of 8 $\frac{5}{16}$ in.

Catalog #	Description
(G) 603-4	#2 Phillips-tip, 4"-shank, cushion-grip screwdriver

Supplier Prefix: KLE

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Solutions Guide

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A

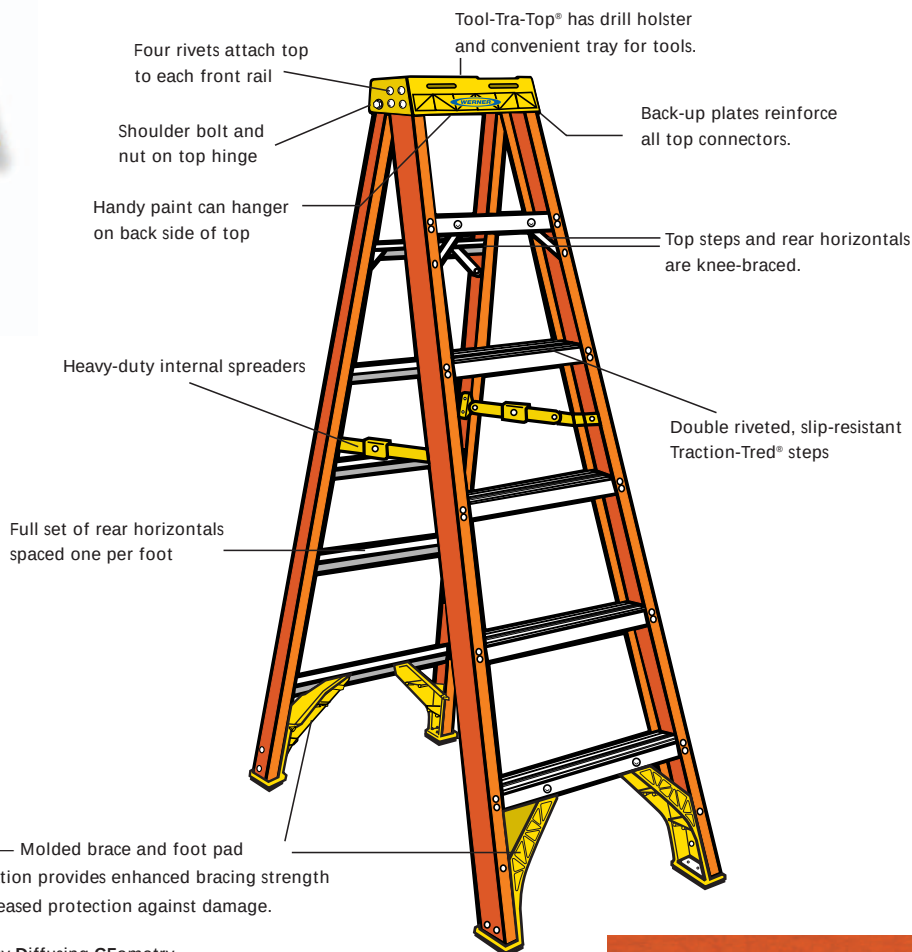


Ladders

STEPLADDER 6200 SERIES

- Load capacity of 300 lbs. for extra heavy-duty professional use
- Type 1A duty rating
- Orange, electronically non-conductive side rails
- Load capacity 300 lbs. for extra heavy-duty professional use
- Every rivet backed up by metal part or washer to protect rails
- Optional yellow molded pail shelf kit, model number 76-2
- Dimensions of top: 5 $\frac{3}{4}$ in. x 13 in.; front rails: 3 $\frac{1}{8}$ in. wide; top flange: $\frac{1}{16}$ in. wide; steps: 3 in. wide; rear rails: 1 $\frac{1}{8}$ in. wide; step flange: $\frac{1}{16}$ in. wide

Catalog #	Size	Approx. Width	Approx. Spread	Approx. Cu. Ft. Per Unit	Approx. Shipping Weight
(A) 6203	3'	18 $\frac{1}{8}$ "	23 $\frac{1}{8}$ "	2	13 lbs.
6204	4'	19 $\frac{7}{8}$ "	29"	3	16 lbs.
6205	5'	21 $\frac{5}{8}$ "	35 $\frac{1}{8}$ "	4 $\frac{1}{10}$	19 lbs.
6206	6'	23 $\frac{3}{8}$ "	41 $\frac{1}{4}$ "	5 $\frac{3}{10}$	22 lbs.
6207	7'	25 $\frac{1}{8}$ "	47 $\frac{1}{2}$ "	6 $\frac{3}{5}$	26 lbs.
6208	8'	26 $\frac{7}{8}$ "	53 $\frac{3}{8}$ "	8 $\frac{1}{10}$	30 lbs.
6210	10'	30 $\frac{3}{8}$ "	65 $\frac{7}{8}$ "	12 $\frac{1}{2}$	39 lbs.
6212	12'	33 $\frac{3}{8}$ "	78 $\frac{1}{4}$ "	15	48 lbs.



* Energy Diffusing GEOMETRY

FIBERGLASS

Supplier Prefix: WER

The Service Provider
Solutions Guide

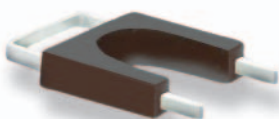
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A



B



Supplier Prefix: ARF

Staple Guns and Staples

T59™ PROFESSIONAL WIRING TACKER

The Arrow T59 professional wiring tacker is specifically designed for the communications installer. The all-steel T59 is finished in durable chrome to withstand the bumps and scratches of professional use. An easy compression span and jam-proof mechanism ensure comfortable, hassle-free use.

Catalog #	Description
(A) T59	Professional wiring tacker

INSULATED STAPLES

UV-resistant insulators guard against impedance and assure long-lasting cable integrity. The insulators are made of super impact-resistant plastic that remains strong even under extreme low-temperature conditions. These extraordinary staples are specially coated to provide three times the holding power of ordinary staples. Determine the correct insulator inner dimension of the staple for the cable job and load the staples into the chamber of the Arrow T59 professional wiring tacker to secure a wide range of wire and cable, up to 8mm in diameter. This tacking system is an ideal way to install RG59 and RG6.

Catalog #	Description	Color	Quantity
(B) 591168BL	Inner dimension: ¼" x ¼" (6mm x 6mm); leg length: 1½"	Black	300
591168	Inner dimension: ¼" x ¼" (6mm x 6mm); leg length: 1½"	Clear	300
591188BL	Inner dimension: ¼" x ⅝" (6mm x 8mm); leg length: 1½"	Black	300
591188	Inner dimension: ¼" x ⅝" (6mm x 8mm); leg length: 1½"	Clear	300
591189BL	Inner dimension: ⅝" x ⅝" (8mm x 8mm); leg length: 1½"	Black	300
591189	Inner dimension: ⅝" x ⅝" (8mm x 8mm); leg length: 1½"	Clear	300

FISKARS

A



B



C



Tool Buckets and Pouches

BUCKET BOSS® 44 AND BUCKET BOSS 56

The Bucket Boss 44 is made with Boss Tex ripstop fabric with 30 outside pockets and 14 inside pockets. An interior loop keeps a hammer in place and accessible, while a special shallow pocket can hold small items like screwdriver bits.

The Bucket Boss 56 is also made with Boss Tex ripstop fabric, and it offers the added benefit of SuperBoss® Tex for reinforcement in high-wear areas. It has 38 outside pockets and 18 inside pockets, a drill holster with drill bit pockets, two tiers of deep interior pockets and much more.

Catalog #	Description
(A) 01044	The Bucket Boss 44
01056	The Bucket Boss 56

DATA-COMM MULTI-POUCH

Featuring a rugged ballistic material in high-wear areas, this multi-pouch holds a punch tool, scissors and cable prep tool. Its spring steel clip fits securely on a belt.

Catalog #	Description
(B) 54052	Data-comm multi-pouch

Tools

DATA-COMM SCISSORS

With its contoured handle in the unmistakable orange color, data-comm scissors are engineered for "palm cutting", the way scissors are actually used on the job. This eliminates the cutting into the hand caused by traditional forged scissors, allowing the installer to perform more cuts with less strain.

Catalog #	Description
(C) 9485-7097	Data-comm scissors

Supplier Prefix: FSK

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Telephone Headsets and Accessories

DUOPRO™ HEADSET FAMILY

Versatility is the hallmark of the DuoPro line. This headset family offers an uncompromising selection of wearing styles to satisfy everyone's preference.

- All models are available with Plantronics trademark voice tube or noise-canceling microphone.
- Industrial-strength ruggedness in a sleek and stylish design
- Superior comfort with any model

Catalog	Description
(A) H181(N)	Behind-the-head neckband for a stable discreet fit
H151(N)	Over-the-ear conformable earloop for a secure, comfortable fit
H161(N)	The over-the-head, unique, double T-pad headband distributes weight evenly, so there's never a speaker pad pressing on the ear.
H171(N)	Convertible includes the over-the-head or over-the-ear configurations for maximum versatility and convenience

CA10 CORDLESS TELEPHONE HEADSET AMPLIFIER

This is the perfect cordless amplifier for the mobile professional who needs to be on call from anywhere within 150 ft. of his phone. Trouble-shoot a problem, pick up a fax, confer with a co-worker and never miss that important call.

- Connects Plantronics H-series headsets to corded business telephones
- The ultra-compact remote delivers a range of up to 150 ft. from the base unit and a six-hour continuous talk time with a rechargeable battery.
- Add remote call answer/end capability with the optional HL10 handset lifter.

Catalog #	Description
(B) CA10	Cordless telephone headset amplifier

M12 VISTA™ TELEPHONE HEADSET AMPLIFIER

This compact universal amplifier connects Plantronics headsets to most business telephones.

- One-button selection between headset and handset
- Separate controls adjust outgoing and incoming volume and mute function.

Catalog #	Description
(C) M12	Vista telephone headset amplifier

Supplier Prefix: PLT



Authorized
Ericsson Representative

IP Telephony Solutions

ENTERPRISE IP TELEPHONY

The Ericsson WebSwitch is a family of IP telephony products, merging voice, data and wireless communications to offer converged networking solutions for small to mid-sized enterprises.

The WebSwitch 2000 works as an IP-PBX and as a VoIP gateway. This platform bridges traditional circuit-switched and next-generation IP telephony by combining an H.323-compliant gateway with gatekeeper functionality and telephony services. It features two or four modular slots. A slot may contain an analog extension card (FXS), an analog trunk card (FXO) or a digital T-1 trunk card. Up to 20 WebSwitches may be networked on the same LAN or across a WAN on multiple networks to form a WebSwitch cluster.

- Remote management via TCP/IP connection
- Voice compression codec options: ITU-T G.711 at 64Kbps, G.723.1 at 6.3Kbps and G.729AB at 8Kbps
- Quality of service support — Layer 3 DiffServ and IEEE 802.1p Layer 2 class of service
- Telephony features: call conferencing, caller I.D. detection on analog trunks, call forward, call hold, call pickup, call queuing, call transfer, common dialing plan, direct inward dialing support for digital trunks, do not disturb, flexible numbering plan, inquiry, hotlines, hunt groups, music on hold, paging, remote trunk access, ring groups, Web-based click and call, integrated voice mail and integrated automated attendant

Catalog #	Description
(A) BFD101100R3A	WebSwitch 2000 M2 basic unit (2 slot)
BFD101102R3A	WebSwitch 2000 M4 basic unit (4 slot)

Supplier Prefix: ECN

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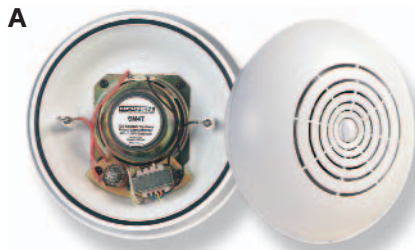


Paging Products

SM SERIES "EZ" INSTALL LINE OF CEILING SPEAKERS

Bogen's SM line of easy-install ceiling speakers drastically cuts system installation time by a minimum of 50 percent plus. Each speaker can be completely installed, mounted in the ceiling tile, secured and connected — all in less than one minute. Specially designed mounting studs pierce through drop ceiling tiles quickly and easily. They are secured by using the two, custom-designed, wide-based wing nuts that are supplied with each speaker. These mounting studs also act as a wire termination point. The lead wires are connected using the two standard wire nuts which are also supplied with each speaker.

The SM line of easy-install ceiling speakers comes in two models: the SM1EZ, which is a 1W single-tap design speaker; and the SM4T, which offers tap settings of .25W, .5W, 1W, 2W and 4W via a rotary switch setting. Both models come with all mounting hardware, are made of durable ABS plastic shells, pass the NEC fire code, have a frequency response of 125Hz to 15KHz and have individual volume controls. An optional SMTB (tile bridge) is also available for the SM series speakers if required.



Catalog #	Description
(A) SM1EZ	1W single-tap design speaker
SM4T	Speaker with tap settings of .25W, .5W, 1W, 2W and 4W



TPU SERIES TELEPHONE PAGING AMPLIFIERS

Bogen's TPU series of amplifiers defines state-of-the-art technology in the telephone paging industry. The TPU series 600 ohm transformer balanced input is perfectly suited to connect to system paging ports and paging adapters, such as Bogen's TAM-B (Telephone Access Module). The TPU series offers a variety of power outputs in the form of 15W, 35W, 60W and 100W models.

Features of the TPU amplifiers include: tele-input, background music input, microphone input, signal-activated muting, adjustable mute threshold, automatic level control, adjustable mute level, fade back from mute, aphex aural exciter, 90V activation, contact closure, thermal and electronic overload protection, Amp-to-Amp bridging capability, wall or rack mount and much more.

Catalog #	Description
(B) TPU	Telephone paging amplifier



PCM2000 MULTI-ZONE PAGING CONTROL MODULE

Bogen's PCM2000 zone paging system provides robust zone paging for applications requiring from 1 to 99 zones, with expanded capability of up to 32 paging zone groups. Its multifunction modules ensure flexibility and future expansion with minimum expense. The multi-zone paging control module consists of PCMTIM (Telephone Interface Module), a TIMCPU (Central Processing Unit), PCMZPMs (Zone Paging Modules) and an optional PCMTBM (Talk-Back Module).

Some of the functions of the PCM2000 include: emergency override paging input; universal tele-interface, which allows easy RJ-11 connection to loop and ground start trunks; PBX or KEY system page ports; 90V station lines; setup system tones to check system activation to control and external equipment; wall or rack mount; no interruption of background basic in zones not being paged; zone modules, which can accept separate background music sources; night ringer activation from 90V ring signal; built-in real-time clock; up to eight-times-triggered toned signaled events; adjustable tone/chime length from two to eight seconds; master clock synchronization ability; code call capability; two-way talk-back capability; privacy beep and much more.

Catalog #	Description
(C) PMC2000	Multi-zone paging control module

Supplier Prefix: BOG

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it's about **YOU****Audio Conferencing Products****AUDIO CONFERENCING**

The Mitel Networks 5303 conference phone is a full-featured analog conference unit that offers the most user-friendly audio conferencing on the market today. It is the only analog conference phone that is available to everyone. It plugs into any telephone wall jack or standard office telephone system, and it is easy to use. The phone features Mitel Networks Softkey operation with a backlit display that provides user prompts, feature customization, caller identification, speed dialing and more. Get all of this at the touch of a button.

The 5303 conference phone has exclusive acoustic beam-forming technology that allows the microphone to automatically focus on individual speakers, eliminating annoying background noise and side conversations. Combined with built-in noise reduction, automatic gain control and full-duplex operation, it makes conference calls as close to being in the same room as possible.

- Supports complete set of telephone features: dialing, answering, transferring, placing calls on hold, caller I.D., redial and speed dial programming
- Available in two distinctive colors: silver ghost or night sky
- Detached control/dial tablet with fixed/programmable buttons and backlit display (two lines x 20 characters)
- Open distribution product

Catalog #	Description	Color
(A) 50001903	Mitel Networks 5303 conference phone	Silver ghost (silver-brushed metallic)
50001900	Mitel Networks 5303 conference phone	Night sky (dark-gray-brushed metallic)

A



Not A
Mitel Dealer
Only
Product

Supplier Prefix: MIT

**Audio Conferencing Products****VOICESTATION™ 100**

Designed as a clear alternative to half-duplex handset speakerphones, VoiceStation 100 delivers professional-quality conferencing to offices and other smaller meeting areas. It is ideal for meetings of up to four participants. With its proven Polycom voice technology and stylish new look, VoiceStation 100 is the meet-any-time conference phone.

Catalog #	Description
(A) 2200-06846-001	VoiceStation 100

A

**SOUNDSTATION®**

The economical choice for everyday business audioconferencing, its distinctive award-winning design is familiar throughout the world. The SoundStation conference phone makes natural full-duplex (two-way) conversations easy, without clipping or distortion. Simple to install and use, extension microphones expand range for medium- to larger-sized rooms.

Catalog #	Description
(B) 2200-00106-001	SoundStation

B

**SOUNDSTATION PREMIER®**

SoundStation Premier delivers the world's best full-duplex audio quality for any conferencing situation — it's the closest thing to handset audio quality. The full-duplex technology allows the user to talk and listen at the same time, without the clipping and distortion likely with ordinary speakerphones. With the satellite option, it can expand to cover the largest boardrooms.

Catalog #	Description
(C) 2200-05200-001	SoundStation Premier

C



Supplier Prefix: POC



IP Telephony Solutions

i2732 IP TELEPHONE

TelStrat presents the cost-effective 16-line i2732 IP telephone for Cisco® AVVID. The i2732 combines standard VoIP network telephony operation with unique telephony functionality that fulfills the voice demands of enterprise customers.

A



- 16-line keys on a single telephone
- Permanent feature keys for simplified IP terminal operation (hold and transfer)
- Hands-free answer-back functionality for the department or globally distributed enterprise
- "Do not disturb" to avoid unwanted interruptions
- Hot dial pad that reduces keystrokes
- Full-duplex speakerphone

Whether deploying the i2732 IP telephone into an entire premise-based network system or including it at the edge of a service provider's hosted communications network, the i2732 IP telephone is the ideal voice terminal for call center personnel, centralized answering positions, executives and general business professionals.

Catalog #	Description
(A) 740-01091-01	i2732 IP telephone

Supplier Prefix: TST



DSL Splitters/Line Conditioner

DSL WALL-MOUNT SPLITTER

- Easy wall phone installation
- Tool-less
- Uninterrupted ADSL service
- Economical installation
- Extra jack for phone accessories

Technical specifications

Filter topology	.2 pole low pass
DC loop current	0 to 100mA
DC loop voltage (tip and ring)	0 to 60VDC
Ring signal	.103 VRMS on the VDC, 20 to 30Hz
DC resistance	<10 ohms (POTS)
Loading capacity	.47nF
Attenuation distortion relative	.1.0, 0.3, 3.4kHz is +/- 1dB maximum
Operating temperature	-40 to 65 C degrees (-40 to 149 F degrees)
Relative humidity	0 to 95 percent non-condensing
Dimension (H x W x D)	.7 in. x 3 in. x 1 in.

Catalog #	Description
(A) AT636DSL	DSL wall-mount splitter

DSL LINE CONDITIONER

- Single line, in-line filter
- Filters out any erratic impedance from telephone equipment

Technical specifications

Filter topology	.2 pole low pass
Ring signal	.103 VRMS on the VDC, 20 to 30Hz
DC resistance	<10 ohms (POTS)
Loading capacity	.47nF
Attenuation distortion relative	.1.0, 0.3, 3.4kHz is +/- 1dB maximum
Operating temperature	-40 to 65 C degrees (-40 to 149 F degrees)
Relative humidity	0 to 95 percent non-condensing
Dimension (H x W x D)	.2.05 in. x .98 in. x .82 in.

Catalog #	Description
(B) AT102DSL	DSL line conditioner

A



B



Supplier Prefix: ALT

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Outside Plant Cable

OUTSIDE VOICE AND DATA (OVD) PRODUCTS

Specify General Cable outside plant wire and cable and be ensured of a broad range of quality industry-standard products. The line includes a wide range of pair sizes in air-core and filled-core cables and specialty wire products for aerial, duct and direct-buried applications. General Cable's plastic-insulated, filled-core cable and buried service wire products are designed for installation where protection against water and moisture entry is required. A variety of sheath designs provide electrical shielding and mechanical protection against rodents and other physical damage. All products comply with either Rural Utilities Service (RUS) (REA), ICEA or Telcordia (Bellcore) specifications. Plus, General Cable OVD wire and cable is noted for its rugged reliability.

PVC-INSULATED DROP WIRE

Standards

- Compliant with RUS Bulletin 1753 F-204 (REA PE-7)

Applications

- Self-supporting, one-pair, parallel, conductor drop wire intended for aerial service connection to the subscriber

Catalog #	Description
(A) ADP-2CP18.5-Z-_K-GCC	PVC-insulated drop wire

Z= Packaging: Pull-pack carton (P), Coil in carton (C), Reel (R)
 _= Insert length, if applicable

GLASS-SUPPORTED DROP WIRE

Standards

- Compliant with RUS Bulletin 1753 F-204 (REA PE-7)

Applications

- Self-supporting drop wire intended for aerial service connection to the subscriber
- Compatible with P-clamp/wedge-type hardware
- No need for support wire grounding

Catalog #	Description
(B) ADN-XXP22-Z-_K-GCC	Glass-supported drop wire

XX= Pair count (02 or 06)
 Z= Packaging: Pull-pack carton (P), Coil in carton (C), Reel (R)
 _= Insert length, if applicable

DOUBLE-JACKETED BURIED SERVICE WIRE — ALUMINUM

Standards

- Compliant with ICEA S-86-634

Applications

- Intended for use in buried service application to the subscriber loops

Catalog #	Description
(C) BSWF-XXPPYY-R-_K-GCC	Double-jacketed buried service wire — aluminum

XX= Pair count (02, 03 or 06)
 YY= Gauge (22 or 24)
 _= Insert reel length (ft.) (2.5 or 5)

DOUBLE-JACKETED BURIED SERVICE WIRE — GOPHER-RESISTANT

Standards

- Compliant with ICEA S-86-634
- RUS 7 CFR 1755.860 (REA PE-86) for 2- and 3-pair constructions

Applications

- Intended for use in buried service application to the subscriber loops
- The shielding material provides resistance to gopher damage.

Catalog #	Description
(D) BWFY-XXPPYY-R-_K-GCC	Double-jacketed buried service wire — gopher-resistant

XX= Pair count (02, 03 or 06)
 YY= Gauge (22 or 24)
 _= Insert reel length (ft.) (2.5 or 5)

Supplier Prefix: CWC



ALUMINUM AND COPPER SHIELD

Standards

- Compliant with Rural Utilities Service (RUS) 7 CFR 1755.390 (RUS PE-39)

Applications

- Intended for duct and direct-buried installations where protection against water and moisture entry is required

Catalog #	Description
(A) DB-_PYY-AL-39-ZK-GCC	Filled solid cable
(B) DB-_PYY-CU-39-ZK-GCC	Filled, solid, 5-Mil copper cable

_ = Insert pair count, available in 6–1800

YY = Gauge (19–26)

Z = Packaging: .7=700 ft. through 5=5,000 ft. reels



COPPER-BEARING STEEL SHIELD

Standards

- Compliant with RUS 7 CFR 1755.390 (RUS PE-39)

Applications

- Intended for duct and direct-buried installations where protection against water and moisture entry is required
- The copper-bearing tape provides increased mechanical protection and gopher resistance.

Catalog #	Description
(C) DB-_PYY-GO-39-ZK-GCC	Filled, solid, copper-bearing, gopher-resistant cable

_ = Insert pair count, available in 6–1800

YY = Gauge (19–26)

Z = Packaging: .7=700 ft. through 5=5,000 ft. reels



ALUMINUM SHIELD — FOAM SKIN

Standards

- Compliant with RUS 7 CFR 1755.890 (RUS PE-89)
- The sheath interfaces are flooded with an adhesive water-blocking compound.

Applications

- Intended for duct and direct-buried installations where protection against water and moisture entry is required

Catalog #	Description
(D) DB-_PYY-AL-89-ZK-GCC	Filled foam-skin cable

_ = Insert pair count, available in 6–1800

YY = Gauge (19–26)

Z = Packaging: .7=700 ft. through 5=5,000 ft. reels



ALUMINUM/STEEL SHIELD — FOAM SKIN

Standards

- Compliant with RUS 7 CFR 1755.890 (RUS PE-89)
- The addition of the steel tape armor provides increased mechanical protection and gopher resistance.

Applications

- Intended for duct and direct-buried installations where protection against water and moisture entry is required

Catalog #	Description
(E) DB-_PYY-AS-89-ZK-GCC	Filled foam-skin CACSP cable

_ = Insert pair count, available in 6–1800

YY = Gauge (19–26)

Z = Packaging: .7=700 ft. through 5=5,000 ft. reels

Supplier Prefix: CWC



Central Office Cable

Central Office Terminating Cable

General Cable offers several flexible terminating cables designed for switching and transmission equipment cabling for the Central Office. Excellent cross-talk performance is attributed to the special shielding, pairing and insulation processes used in manufacturing these products. All products are UL-Listed Type CMR. In addition, the 22 AWG and 26 AWG products are Telecordia certified (GR-137-Core).

600C SERIES

Standards

- GCC specification 4502 — 22 AWG tinned copper
- Dual-insulated (PE/PVC), dual-shielded, flame-retardant PVC gray jacket
- TIA/EIA 568-B.2 (Category 3)

Applications

- Used for interconnecting DS1/DS2 digital equipment to digital cross-connects (DSX), capable of handling 10Mbps speeds
- Maximum run distance of 1,310 ft. between active network elements

Catalog #	Description	AWG
(A) 600-6P22-DF-1K-GCC	6 pair	22
600-25P22-DF-1K-GCC	25 pair	22
600-30P22-DF-1K-GCC	30 pair	22
600-32P22-DF-1K-GCC	32 pair	22
600-50P22-DF-1K-GCC	50 pair	22

1161A SERIES

Standards

- GCC specification 7271 — 24 AWG tinned copper
- Single-insulated (HDPE), shielded, flame-retardant PVC gray jacket
- TIA/EIA 568-B.2 (Category 3)

Applications

- Used for DS1, DS1C, DS2 and 10Base-T
- Maximum run distance of 1,130 ft. between active network elements

Catalog #	Description	AWG
(B) 1161-4P24-OS-1K-GCC	4 pair	24
1161-12P24-OS-1K-GCC	12 pair	24
1161-16P24-OS-1K-GCC	16 pair	24
1161-25P24-OS-1K-GCC	25 pair	24
1161-28P24-OS-1K-GCC	28 pair	24
1161-32P24-OS-1K-GCC	32 pair	24
1161-50P24-OS-1K-GCC	50 pair	24

1249C SERIES

Standards

- GCC specification 4129 — 26 AWG tinned copper
- Dual-insulated (PE/PVC), dual-shielded, dual-PVC gray jacket

Applications

- Used for DS1, DS1C and DS2
- Maximum run distance at 900 ft. between active network elements

Catalog #	Description	AWG
(C) 1249-4P26-DF-1K-GCC	4 pair	26
1249-12P26-DF-1K-GCC	12 pair	26
1249-16P26-DF-1K-GCC	16 pair	26
1249-25P26-DF-1K-GCC	25 pair	26
1249-28P26-DF-1K-GCC	28 pair	26
1249-32P26-DF-1K-GCC	32 pair	26
1249-50P26-DF-1K-GCC	50 pair	26

Supplier Prefix: CWC

The Service Provider

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BUSINESSPARTNER

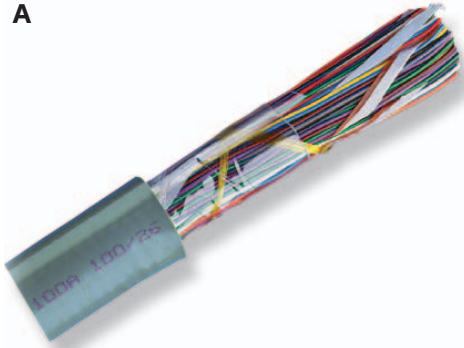
AUTHORIZED DISTRIBUTOR

Central Office Cable CABLE AND WIRE

ExchangeMAX cable and wire products are designed for flexibility whether used in a Central Office or in remote applications. Cabling designs for transport and switching applications continue to evolve from large and bulky products to smaller and more flexible solutions. Avaya's twisted-pair and coaxial cables are some of the smallest in the industry. ExchangeMAX coaxial cable, shielded/unshielded hookup wire and twisted-pair cable products have the optimum combination of electrical, physical and mechanical properties providing excellent transmission performance for Central Office applications.

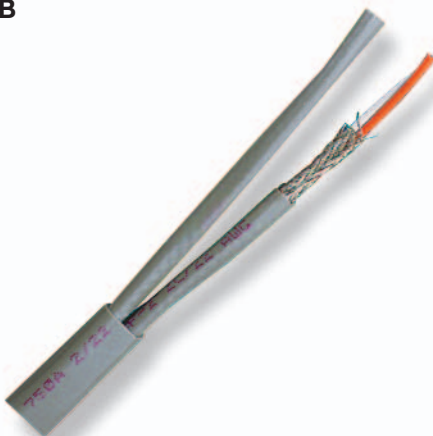


A



Catalog #	Product Code	Pair/AWG	Packaging
Shielded twisted-pair cable			
(A) 108236662	1161A	25/24	RVAR
108324609	1161A	28/24	RVAR
108896879	1161A	30/24	RVAR
108341744	1161A	32/24	RVAR
108236696	1161A	50/24	RVAR
106371313	1249C	4/26	RVAR
106371339	1249C	6/26	RVAR
106371545	1249C	12/26	RVAR
106371560	1249C	16/26	RVAR
106371370	1249C	20/26	RVAR
106371396	1249C	25/26	RVAR
106371404	1249C	28/26	RVAR
106371446	1249C	32/26	RVAR
106371461	1249C	50/26	RVAR
108685595	1249C	100/26	RVAR
106989098	606C	6/22	RVAR
106989163	607C	12/22	RVAR
106989353	608C	16/22	RVAR
106556608	609C	25/22	RVAR
106556640	613C	30/22	RVAR
106556723	615C	32/22	RVAR
106556624	616C	28/22	RVAR
106829393	617C	20/22	RVAR
107732398	618C	56/22	RVAR
700195910	1107B	12/24	RVAR
105434724	1107A	25/24	R1000

B



Catalog #	Product Code	Pair (P) or Conductor (C)/AWG	Packaging (Color)
Coaxial cable			
(B) 107106395	734D	—	RVAR
105529036	734A	—	RVAR
106007743	735A	—	RVAR
106075864	1735A	006	RVAR
106642366	1735A	012	RVAR
Unshielded twisted-pair cable			
104309208	TIW	2P/24	W1000
105438535	TIW	6P/24	RVAR
105438584	TIW	25P/24	RVAR
105056063	TIW	100P/24	R1000
105438626	TIW	100P/24	RVAR
102313442	TIW	25P/26	RVAR
103096517	T1W	100P/26	RVAR
106771223	1116A	28P/24	RVAR
105412928	286A	4P/24	RVAR
105412860	270A	50P/24	RVAR
105363105	262A	100P/24	RVAR
105412498	808A	32P/26	RVAR
105412472	806A	100P/26	RVAR
Distributing frame wire			
102337870	DT	2C/22	C3000 (W/BL)
102421922	DT	2C/22	C3000 (W/G)
102421930	DT	2C/22	C3000 (W/O)
102421948	DT	2C/22	C3000 (W/R)
102379195	DT	2C/24	C5000 (Y/BL)
Miscellaneous hookup wire			
103361200	Y2	5C/24	C1350 (BL-W/W-BL, O-W/W-O, G)
105065569	Y2	5C/24	S1000 (BL-W/W-BL, O-W/W-O, G)
105414031	761A1	1P/24	R1000 (BL/W)
105428924	761A2	1P/24	RVAR (O/W)
106557077	750A	2P/22	RVAR (O/W)
106977432	BF3	2P/22	RVAR (BI/W)
106977721	BF3	2P/22	RVAR (O/W)
843742529	BH2	2C/22	S710 (BK/R-BK)
843745399	BH2	4C/24	S370 (Y/Y-G/R/R-G)
402176093	CCW-G	2C/22	S400 (V/W)

Supplier Prefix: AVA

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Aerial Service Wire

ADP NMS (6 X 24) COMPACT DESIGN

The ADP NMS (6 x 24) compact design features a black abrasion-resistant vinyl jacket and is used to extended telephone service to subscriber premises from the distribution cable or cable terminal. The product features four fiberglass yarns that provide all the longitudinal strength necessary. Simple access procedures allow for quick and easy installation with the small, standard, off-the-shelf industry hardware.

Catalog #	Description	Minor/Major Dimensions	Standard Packaging	Package	Approx. Weight
(A) USW-6P24-P-.6K-ESS	6 pair	0.21" (5.3mm)/ 0.39" (9.9mm)	600' (183m)	POP® box	49 lbs./kft. (22 kg/km)
USW-6P24-R-1K-ESS	6 pair	0.21" (5.3mm)/ 0.39" (9.9mm)	1,000' (305m)	Reel	84 lbs./kft. (38 kg/km)

Superior Essex offers a complete line of outside plant cables. Please contact your local Graybar representative for more information on different constructions and pair/strand counts.



ADP-S

ADP-S is a vinyl-jacketed, aerial service wire designed for use in extending communications service (voice, data and video) to a subscriber premises from the distribution cable terminal. This product has additional capabilities over the standard ADP NMS product because it contains a shielding screen. The conductors are wrapped within a metallic foil, for insulation from interference, to provide high-quality digital transmission. In addition, a drain wire runs longitudinally the length of the wire to drain off Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI).

Catalog #	Description	Minor/Major Dimensions	Standard Packaging	Package	Approx. Weight
(B) ADN-S-3P22-R-1K-ESS	3 pair	0.25" (6.35mm)/ 0.43" (10.92mm)	1,000' (305m)	Reel	59 lbs./kft. (88 kg/km)
ADN-S-5P22-R-1K-ESS	5 pair	0.28" (7.11mm)/ 0.49" (12.45mm)	1,000' (305m)	Reel	78 lbs./kft. (116 kg/km)

Superior Essex offers a complete line of outside plant cables. Please contact your local Graybar representative for more information on different constructions and pair/strand counts.

Outside Plant Cable

BDW A/BDW G

BDW A and BDW G are filled, double-jacketed buried wires intended for direct burial applications. Applications include distribution circuits and service entrance wires. All types are designed to withstand installation stresses. The filling is an ETPR compound, which completely coats each insulated conductor and fills the air space between conductors. BDW A is recommended for non-gopher areas. BDW G provides protection from rodents or harsh environments.

Catalog #	Description	Nominal Outside Diameter	Standard Packaging	Package	Approx. Weight
(C) BSWF-2P24-R-5K-ESS	2 pair	0.27" (6.86mm)	5,000' (1,525m)	Reel	31 lbs./kft. (46kg/km)
BSWF-3P24-R-5K-ESS	3 pair	0.29" (2.37mm)	5,000' (1,525m)	Reel	37 lbs./kft. (55kg/km)
BSWY-2P24-R-5K-ESS	2 pair	0.28" (7.11mm)	5,000' (1,525m)	Reel	39 lbs./kft. (58kg/km)
BSWY-3P24-R-5K-ESS	3 pair	0.31" (7.87mm)	5,000' (1,525m)	Reel	46 lbs./kft. (68kg/km)

Superior Essex offers a complete line of outside plant cables. Please contact your local Graybar representative for more information on different constructions and pair/strand counts.

Supplier Prefix: CWC

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SEALPIC® AND SEALPIC-FSF*

SEALPIC-FSF cables are designed for direct burial or duct applications where protection from moisture is required. SEALPIC may be used aerially, but it must be attached to a support strand.

Catalog #	Description	Nominal Outside Diameter	Standard Length	Approx. Weight
(D) AD-25P24-AL-22-5K-ESS	25 pair	0.53" (13mm)	5,000' (1530m)	132 lbs./kft. (197kg/km)
AD-50P24-AL-22-5K-ESS	50 pair	0.67" (17mm)	5,000' (1530m)	225 lbs./kft. (335kg/km)
DB-25P24-AL-89-5K-ESS	25 pair	0.57" (14mm)	5,000' (1530m)	157 lbs./kft. (234kg/km)
DB-50P24-AL-89-5K-ESS	50 pair	0.73" (19mm)	5,000' (1530m)	266 lbs./kft. (396kg/km)

*All FSF products are available in PE-39 construction.

Superior Essex offers a complete line of outside plant cables. Please contact your local Graybar representative for more information on different constructions and pair/strand counts.

Fiber Optic Cable

LOOSE TUBE FIBER OPTIC PRODUCTS

- Outside plant applications: Lashed aerial, underground conduit and direct burial installations
- Dry (SAP) core standard
- Standard and enhanced bandwidths available
- Corrugated steel armor for compressive strength and rodent protection (armored versions only)



Catalog #	Description
Armored	
(E) S-OP-6-LA-D-4-BK-ESS	Fiber count 6
S-OP-12-LA-D-4-BK-ESS	Fiber count 12
S-OP-24-LA-D-4-BK-ESS	Fiber count 24
S-OP-36-LA-D-4-BK-ESS	Fiber count 36
S-OP-48-LA-D-4-BK-ESS	Fiber count 48
S-OP-72-LA-D-4-BK-ESS	Fiber count 72
S-OP-96-LA-D-4-BK-ESS	Fiber count 96
S-OP-144-LA-D-4-BK-ESS	Fiber count 144
S-OP-216-LA-D-4-BK-ESS	Fiber count 216
S-OP-288-LA-D-4-BK-ESS	Fiber count 288
Non-armored	
(F) S-OP-6-LT-D-4-BK-ESS	Fiber count 6
S-OP-12-LT-D-4-BK-ESS	Fiber count 12
S-OP-24-LT-D-4-BK-ESS	Fiber count 24
S-OP-36-LA-D-4-BK-ESS	Fiber count 36
S-OP-48-LA-D-4-BK-ESS	Fiber count 48
S-OP-72-LA-D-4-BK-ESS	Fiber count 72
S-OP-96-LA-D-4-BK-ESS	Fiber count 96
S-OP-144-LA-D-4-BK-ESS	Fiber count 144
S-OP-216-LA-D-4-BK-ESS	Fiber count 216
S-OP-288-LA-D-4-BK-ESS	Fiber count 288

Superior Essex offers a complete line of outside plant cables. Please contact your local Graybar representative for more information on different constructions and pair/strand counts.

Supplier Prefix: CWC

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Leading Optical Innovations

Fiber Optic Cable**SINGLE JACKET LOOSE TUBE CABLE**

Single jacket cable is the classic outside plant cable offering from OFS. Tough enough for outdoor use, this RUS-Listed cable also has a small diameter and is lightweight and flexible, making it easy to handle and install for duct and lashed aerial applications. It is available in fiber counts to 288 (also offered in counts to 864 in the AccuTube™ design).

Catalog #	Description
(A) AT-3BM12DT-144	144 fiber, singlemode, dielectric .35dB cable

LIGHT ARMOR LOOSE TUBE CABLE

Light Armor cable has long been a popular cabling solution for applications needing added compressive strength and rodent resistance. Corrugated steel armor and a rugged polyethylene jacket give extra durability to a RUS-Listed cable that remains lightweight, flexible and easy to install. It is available in fiber counts to 288 (also offered in counts to 864 in the Light Armor AccuTube design).

Catalog #	Description
(B) AT-3BMH2DT-144	144 fiber, Light Armor, DryBlock™, singlemode .35dB cable

POWERGUIDE® ADSS LOOSE TUBE CABLE

PowerGuide ADSS, all-dielectric self-supporting cable is today's high-performance choice for aerial applications, including power transmission and distribution networks. Ideal for long spans up to 3,281 ft. (1,000m) or more, this custom-designed, RUS-Listed cable needs no pre-installed messenger and is quickly installed in a single pass. It is available in fiber counts to 288 (also offered in counts to 864 in the PowerGuide AccuTube design).

Catalog #	Description
(C) AT-34M27DT-096-*	96 fiber, PowerGuide, DryBlock, matched-clad singlemode cable

*Please contact your local Graybar representative regarding your application, span lengths and loading conditions to complete the custom design and part number of your complete sheath strength system.

OPTION1™ OUTDOOR/INDOOR LOOSE TUBE CABLE

OPTION1 riser-rated outdoor/indoor cable combines the safety features of an indoor riser cable with the durability needed for outside plant use. This unique, dual-purpose cable saves time and money with direct outdoor-to-indoor cable transitions using a single cable and no splices. It is also rated for low-smoke/zero-halogen indoor applications and flame resistance (IEEE 383). It is available in fiber counts to 288.

Catalog #	Description
(D) AT-RU91206-024	24 fiber, Option1, dielectric central-member, multimode cable

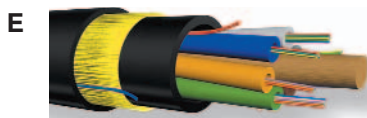
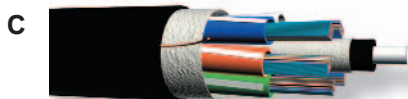
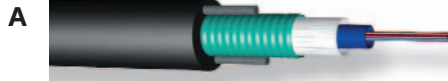
Supplier Prefix: OFX

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ALCATEL



Fiber Optic Cable

- Alcatel's AFC™ coating process delivers superior aging performance.
- The ABM2™ buffer tube material enhances flexibility and kink resistance while maintaining optical and mechanical integrity.
- ColorLock™ enhances fiber identification and colored fiber reliability.
- Singlemode fiber is designed to provide optimum performance in both the 1,310 and 1,550 nm wavelength operating ranges.
- Enhanced singlemode fiber (E-SMF) is designed to provide improved performance across the full 1,265 to 1,625 nm region, which provides 30 percent more wavelengths.
- The uniqueness of the TeraLight™ fibers lies in the balance of three key factors affecting fiber performance: effective area, chromatic dispersion and dispersion slope.
- Optimized for the metropolitan backbone environment with distances greater than 70km at 10Gbps operation without dispersion compensation, TeraLight METRO guarantees 1,310 nm operation with low dispersion.
- TeraLight ULTRA is designed for the long haul and ultra-long haul applications, as these networks evolve to higher bit rates (40Gbps and higher) and longer distances (more than 1,000km). It guarantees 1,450 nm attenuation and optimized effective area.

MICROUNITUBE® CABLE

With a small central tube that can accommodate up to 12 fibers, these cables provide easy fiber access, routing and termination. This cable design is well suited for aerial, buried or duct applications.

Catalog

(A) For a list of catalog numbers, contact your local Graybar representative.

OPTIMIZED LOOSE TUBE CABLE

This reduced diameter cable is suitable for aerial, buried or duct applications. It is available in a wide variety of dielectric or armored configurations with a single or dual jacket design.

Catalog

(B) For a list of catalog numbers, contact your local Graybar representative.

STRANDED RIBBON CABLE

This is a high-count cable that enables operators to place up to 864 fibers in a cable an inch in diameter, optimizing potential revenue per cable pathway.

Catalog

(C) For a list of catalog numbers, contact your local Graybar representative.

MICRODUCT CABLE

Microduct cable is engineered for density, performance and reliability. In spite of its small diameter (7.2mm for the 72 fiber-count cable), it performs admirably in urban environments, in terms of crush, bending, torsion and temperature.

Catalog

(D) For a list of catalog numbers, contact your local Graybar representative.

ADSS CABLE

With a capacity of greater than 144, this is a universal solution for a large variety of applications on medium- and high-voltage lines up to about 275kV. By adapting aramid content, spans of 800m or even 1,000m are possible.

Catalog

(E) For a list of catalog numbers, contact your local Graybar representative.

Tools

BUFFER TUBE ACCESS TOOL

A revolutionary tool designed to access a wide range of buffer tube sizes and fiber counts enables the opening of buffer tubes in virtually any commercially available loose tube cable.

Catalog

(F) For a list of catalog numbers, contact your local Graybar representative.

Supplier Prefix: AUH

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Rome Cable

C O R P O R A T I O N

Central Office Cable

ROME TELEPHONE POWER CABLE, 600V

Install this general purpose wiring in telephone Central Office power plants within raceway, or on racks or trays since the gray finish harmonizes with the color of other telephone equipment. Cables are rated 90 C degrees in dry locations and 75 C degrees in wet locations at a maximum circuit voltage of 600V.

In addition to the constructions listed below, Rome telephone power cable also comes in Specification 7064 (8 AWG – 1,000MCM Flex conductor, HYPALON® insulation and no cotton braid) and Specification 7066 (8 AWG – 750MCM Flex conductor, HYPALON insulation and cotton braid).

Specification 7060:

- HYPALON insulation, cotton braid, gray saturant-finish Type RHH or RHW, VW-1, oil resistant II and sun resistant for CT use

Specification 7070:

- Low-smoke, non-halogen, elastomeric insulation, cotton braid, Type RHH or RHW, limited-smoke and sun resistant for CT use

Specification 7076:

- Flexible conductor, low-smoke, non-halogen, elastomeric insulation, cotton braid, Type RHH or RHW, limited-smoke and sun resistant for CT use

A



Catalog #	Size	Nominal Outside Diameter	Approx. Net Weight/Length
Specification 7060			
(A) TPC-14-GY-5K-ROM	*14	.21"	29 lbs./1,000'
TPC-12-GY-5K-ROM	*12	.23"	40 lbs./1,000'
TPC-10-GY-5K-ROM	*10	.26"	56 lbs./1,000'
TPC-8-GY-5K-ROM	*8	.31"	87 lbs./1,000'
TPC-6-GY-5K-ROM	*6	.35"	124 lbs./1,000'
TPC-4-GY-5K-ROM	*4	.40"	180 lbs./1,000'
TPC-2-GY-5K-ROM	*2	.46"	265 lbs./1,000'
TPC-1/0-GY-5K-ROM	*1/0	.58"	425 lbs./1,000'
TPC-2/0-GY-5K-ROM	*2/0	.62"	520 lbs./1,000'
TPC-4/0-GY-5K-ROM	*4/0	.73"	785 lbs./1,000'
TPC-350-GY-2.5K-ROM	*350	.93"	1270 lbs./1,000'
TPC-500-GY-2K-ROM	*500	1.05"	1770 lbs./1,000'
TPC-750-GY-2K-ROM	*750	1.26"	2645 lbs./1,000'
Specification 7070			
TPCL-14-GY-5K-ROM	*14	.21"	29 lbs./1,000'
TPCL-12-GY-5K-ROM	*12	.23"	40 lbs./1,000'
TPCL-10-GY-5K-ROM	*10	.26"	56 lbs./1,000'
TPCL-8-GY-5K-ROM	*8	.31"	87 lbs./1,000'
TPCL-6-GY-5K-ROM	*6	.35"	124 lbs./1,000'
TPCL-4-GY-5K-ROM	*4	.41"	184 lbs./1,000'
TPCL-2-GY-5K-ROM	*2	.47"	271 lbs./1,000'
TPCL-1/0-GY-5K-ROM	*1/0	.59"	434 lbs./1,000'
TPCL-2/0-GY-5K-ROM	*2/0	.64"	532 lbs./1,000'
TPCL-4/0-GY-5K-ROM	*4/0	.75"	806 lbs./1,000'
TPCL-350-GY-2.5K-ROM	*350	.95"	1290 lbs./1,000'
TPCL-500-GY-2K-ROM	*500	1.08"	1790 lbs./1,000'
TPCL-750-GY-2K-ROM	*750	1.29"	2666 lbs./1,000'
Specification 7076			
TPCLF-8-GY-5K-ROM	8	.33"	100 lbs./1,000'
TPCLF-6-GY-5K-ROM	6	.38"	140 lbs./1,000'
TPCLF-4-GY-5K-ROM	4	.44"	215 lbs./1,000'
TPCLF-2-GY-5K-ROM	2	.50"	305 lbs./1,000'
TPCLF-1/0-GY-5K-ROM	1/0	.66"	510 lbs./1,000'
TPCLF-2/0-GY-5K-ROM	2/0	.70"	577 lbs./1,000'
TPCLF-4/0-GY-5K-ROM	*4/0	.82"	847 lbs./1,000'
TPCLF-350-GY-2.5K-ROM	*350	1.04"	1377 lbs./1,000'
TPCLF-500-GY-2K-ROM	*500	1.22"	1920 lbs./1,000'
TPCLF-750-GY-2K-ROM	*750	1.52"	2800 lbs./1,000'

*Items are considered stock items for Rome Cable.

Supplier Prefix: CWC

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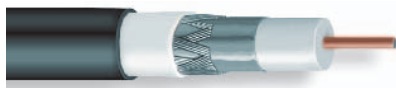


Coaxial Cable

HIGH-SPEED DS3 AND DS4 CABLES BELLCORE SPECIFICATION GR-139-CORE COMPLIANT

Catalog #	Belden Code	Description
(A) 735-NP-01-SP-1K-BED	735A1	Single coax with 26 AWG solid silver-coated copper conductor, Beldfoil® with 93% tinned copper braid over foamed HDPE insulation, NEC/CMR
735-NP-01-ST-1K-BED	735A1T	Same as above with tracer
735-P-01-SP-1K-BED	735A1P	Plenum-rated version of 735A1
735-NP-02-SP-1K-BED	735A2	Siamese version of 735A1
735-NP-02-ST-1K-BED	735A2T	Same as 735A2 with tracer
735-NP-03-SP-1K-BED	735A3	3-pack version of 735A1
735-NP-06-SP-1K-BED	735A6	6-pack version of 735A1
735-NP-08-SP-1K-BED	735A8	8-pack version of 735A1
735-NP-09-SP-1K-BED	735A9	9-pack version of 735A1
735-NP-12-SP-1K-BED	735A12	12-pack version of 735A1
735-NP-16-SP-1K-BED	735A16	16-pack version of 735A1
735-NP-24-SP-1K-BED	735A24	24-pack version of 735A1
734-NP-01-1K-BED	734A1	Single coax with 20 AWG solid bare copper conductor, Beldfoil with 85% tinned copper braid over foamed HDPE insulation, NEC/CMR
734-P-01-1K-BED	734A1P	Plenum-rated version of 734A1, NEC/CMR
734-NP-01-SP-1K-BED	734D1	Single coax with 20 AWG silver-coated copper conductor, Beldfoil with 85% tinned copper braid over foamed HDPE insulation, NEC/CMR
734-NP-01-ST-1K-BED	734D1T	Same as above with tracer
734-NP-02-SP-1K-BED	734D2	Siamese version of 734D1
734-NP-02-ST-1K-BED	734D2T	Same as 734D2 with tracer
734-NP-06-SP-1K-BED	734D6	6-pack version of 734D1
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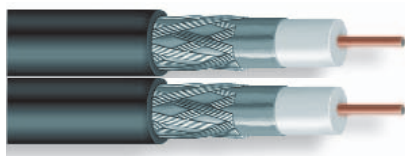
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COAXIAL CABLE

Catalog #	Belden Code	Description	Shield/Braid Type	NEC Rating
(B) RG6-NP-80-FA-B-FN-R-BED	7915A	RG6/U	Duobond Plus/80% AL	CATV/CM

C



DIRECT BROADCAST SATELLITE/DBS CABLE (DUAL RG6/U)

Catalog #	Belden Code	Description	Shield/Braid Type	NEC Rating
(C) RG6D-NP-60-FA-FN-R-BED	1841A	RG6/U	Duobond II® Foil/60% AL	CATV/CM

BROADBAND/CATV CABLES

Catalog #	Belden Code	Description	Shield/Braid Type	NEC Rating
RG59-NP-40-FA-FN-R-BED	9100	Series 59	Duobond II Foil/40% AL	CATV/CM
RG59-NP-67-FA-FN-R-BED	9104	Series 59	Duobond II Foil/67% AL	CATV/CM
RG59-NP-AQ-FN-R-BED	1186A	Series 59	Duobond IV®/65%/45% AL	CATV/CM
RG6-NP-40-FA-FN-R-BED	9114	Series 6	Duobond II Foil/40% AL	CATV/CM
RG6-NP-60-FA-FN-R-BED	9116	Series 6	Duobond II Foil/60% AL	CATV/CM
RG6-P-60-FA-TC-R-BED	9116P	Series 6	Duobond II Foil/60% AL	CATVP/CMP
RG6-R-60-FA-FN-R-BED	9116R	Series 6	Duobond II Foil/60% AL	CATVR/CMR
RG6-NP-80-FA-FN-R-BED	9058	Series 6	Duobond Foil/80% AL	CATV/CM
RG6-NP-AQ-WH-FN-P-BED	1189A	Series 6	Duobond IV/60%/40% AL	CATV/CM
RG6-P-AQ-TC-R-BED	1189AP	Series 6	Duobond IV/60%/40% AL	CATVP/CMP
RG6-O-60-FA-FN-R-BED	1545A	Series 6	Duobond II Foil/60% AL	CATV/CM
RG6-O-60-FA-FP-R-BED	9066	Series 6	Duobond II Foil/60% AL	Direct burial
RG11-NP-60-FA-FN-R-BED	1523A	Series 11	Duobond II Foil/60% AL	CATV/CM
RG11-O-60-FA-FP-R-BED	1525A	Series 11	Duobond II Foil/60% AL	Direct burial

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